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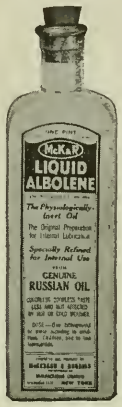

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NEUROLOGY.

RELATIVE EFFECTIVENESS OF VARIOUS FORMS OF TREATMENT IN NEUROSYPHILIS.

GLOTUS, J. H., ET AL., draw the following conclusions from their investigation (*Jour. A. M. A.*, March 12, 1921):

Without making any pretense at setting forth final conclusions in the matter, in view of the difficulty of establishing adequate controls in a clinical investigation of this type, we may state that in our experience:

1. A comparison of the findings on patients receiving spinal drainage in conjunction with arsphenamin intravenously and routine mercuralizaton, and the findings on patients receiving an equal amount of routine treatment without spinal drainage, demonstrates no superiority in favor of the drainage method.

2. The most immediate change produced by either of these methods of treatment is in the cell count.

3. A transient but marked rise, followed by a fall toward normal limits, occured in patients receiving spinal drainage, and we have reason to believe that a similar Herxheimer-like curve of pleocytosis accompanied by transient exacerbation of symptoms occurs in many patients under treatment for neurosyphilis by routine methods.

4. Temporary rise in the cell count early in the course of treatment should not, therefore, necessarily be regarded as of unfavorable prognostic significance.

5. In ten patients in whom spinal drainage had produced indifferent results, the administration of arsphenamized serum intraspinally some months later, produced what appeared to be more satisfactory and more permanent results. [E. H. R.]

SURGERY.

REMOVAL OF THE GALL-BLADDER WITHOUT DRAINAGE.

WILLIS, A. M., (*Jour. A. M. A.*, March 12, 1921) summarizes his paper as follows:

I would emphasize again that the omission of drainage after the majority of operations of cholecystectomy is a procedure that is perfectly safe, and that the results obtained by such omission are distinctly superior to those following the older method of packing or draining with gauze. This is indicated clearly, not only by my own results but also by those obtained by other surgeons, and it is my earnest hope that the omission of drainage in such cases will be more widely tried, for I am thoroughly convinced that the surgeon who makes an impartial test will become a convert. [E. H. R.]

RECONSTRUCTION OF THE HAND.

TAYLOR, R. T. (*Surg., Gyn., and Obstet.*, March, 1921) presents a most interesting article on this subject, with a new technic for repair of severed tendons. He devotes much time to a description of the tendon arrangement of the hand and the possibilities of transplantations of tendons from one finger to produce function in others and of bone transplantation in the metacarpals and phalanges. [E. H. R.]

(Continued on page vi.)

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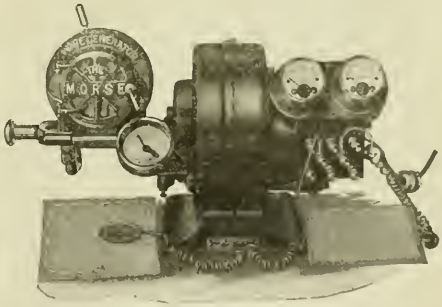

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GYNECOLOGY.

A STUDY OF CHRONIC ENDOCERVICITIS.

MATTHEWS, H. B. (*Surg., Gyn., and Obstet.*, March, 1921) believes that this is a very common and intractable disease which has far greater possibilities in the production of pelvic disease than has heretofore been supposed. In the vast majority of cases the only hope for cure is a complete removal of the infected cervical tissue. This the author does by a cone-shaped enucleation of the cervix, described in his paper. [E. H. R.]

PELVIC ABSCESS.

MARSTON, L. R. (*Arch. of Surg.*, March, 1921) presents an exhaustive study of this disease, covering sixty-eight pages and based on a study of seven hundred and sixteen cases. He firmly advocates pelvic drainage but warns of the dangers to follow unless very great care is to be given the case post operatively. The article is an intelligent review of the pathology of this condition. [E. H. R.]

PATHOLOGY.

CANCER INFECTION.

OCHSNER, A. J. (*Ann. Surg.*, March, 1921) warns against the assumption that cancer is not an infectious disease because no organism has been constantly found to establish the infection theory. Nor does he believe that failure to transplant cancer in humans is evidence against its infectious nature. The infection in animals is already well established.

The article is suggestive and of interest. [E. H. R.]

THE RELATION OF CHRONIC FIBROSIS AND THROMBOPHLEBITIS OF THE SPLEEN TO CONDITIONS OF THE BLOOD AND LIVER.

MAYO, W. J. (*Arch. Surg.*, March, 1921) presents a most interesting and well considered article on this broad problem, and states as a general conclusion that generalized splenic phosis and thrombophlebitis are the result of many causes and the pathologic changes in the spleen, liver, and blood are regularly developed without regard to the primary etiologic factors. [E. H. R.]

STUDIES IN EXHAUSTION.

CRILE, G. W. (*Ann. Surg.*, March, 1921) reviews work done in the past on this subject by himself and his associates, especially Dolby, in reference to the changed picture in cortical cells and concludes that prolonged insomnia produces histologic lesions in the central nervous system, the lung and suprarenals, but produces no appreciable alteration in the H-ion concentration of the blood, but it does decrease the electric conductivity of the central nervous system, cerebrum, cerebellum, and spinal cord. [E. H. R.]

OBSTETRICS.

THE INTRAVENOUS USE OF CORPUS LUTEUM EXTRACT IN NAUSEA OF PREGNANCY.

HIRST, J. C. (*Jour. A. M. A.*, March 19, 1921) reports very favorable results from the intravenous use of this preparation. No untoward effects were noticed. Two c.c. were used, every other day, in mild cases, or the same dose every day in severe cases.

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The Boston Medical and Surgical Journal

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Original Articles.

A MECHANICAL EXPLANATION OF THE SUFFERING WHICH IS ASSOCIATED WITH PROLAPSE OF THE UTERUS.

By George M. Garland, M.D., Boston.

Formerly Physician to the Woman's Room in the Out-Patient Department of the Massachusetts General Hospital.

Thirty-two years ago, Dr. W. E. Boardman, who died of pneumonia recently, made the remark to me that in his experience with womb troubles, he had observed that prolapse of the uterus, irrespective of any flexions or versions present, was the chief cause of suffering in the patient. This remark agreed with my own experience. At that time, I had charge of the Woman's Room in the Out-Patient Department of the Massachusetts General Hospital, where I was having the benefit of a very large clinic, and I had, myself, made the observation that prolapse of the uterus, among so-called displacements, was the predominant cause of suffering. My interest was therefore aroused to study the reason why prolapse of the uterus should cause such distress. After a time, I accumulated a few observations, as follows:

A prolapsed uterus which is giving rise to backache and pressure, distress and abdominal pain, usually appears with an enlargement and a congested condition of the body of the womb. When this condition is severe and has been in existence for some time, the uterus becomes tender to pressure, tender to ordinary examination, and to efforts toward replacement. Under such conditions, foci of inflammation of tissues adjacent to the uterus are apt to form. These foci are sometimes very tender and may result in adhesions, which resist efforts at elevation of the uterus. This congested condition of the womb and its annexes may be easily understood if we consider the blood supply through the womb. The vessels enter on each side of the uterus through the broad ligaments, and when the uterus is forced downward in prolapse, the vessels on either side are mechanically folded together against the side of the uterus. While this folding of the vessels does not prevent the entrance of arterial blood under cardiac impulse, it does interfere with the venous escapement of the blood, and results in a passive congestion of back-water pressure. The indication for this venous obstruction is the elevation of the uterus to a point where its circulation will be normal and free once more. In my own practice of restoring a prolapsed uterus, I have never used any instruments, but, placing the patient in the knee-chest position, I have gently pushed the uterus, without force,

from the pelvis toward the abdomen. If there was much tenderness present, or foci of inflammation to be felt, I employed hot-water injections to reduce the congestion and tenderness, and also used pledgets of lamb's wool saturated with glycerine. When the tenderness was sufficiently reduced, I inserted a small pessary to hold the uterus up. The large pessaries are liable to press upon neighboring parts and may cause trouble. One simply needs a small cradle, so to speak, to hold the uterus up where it belongs. Restoration of the circulation by this method is quickly followed by the disappearance of local congestion and the diminution of all subjective symptoms of pain and discomfort. The body of the uterus becomes smaller and firmer in texture; the tonicity of the ligaments attached to the uterus is restored and helps to hold the uterus in place. In the course of a few weeks of such support, the vagina, which, at the beginning, was relaxed and admitted a pessary of considerable size, shrinks in its circumference, and one is obliged to refit it with a smaller pessary. The disappearance of congestion and the cure of the subjective symptoms by restoration of free circulation, seems to be conclusive that the prolapse was productive of the venous obstruction described, and the cause of all distress.

To illustrate the mechanics of this condition in another way, I will remind you of an ovarian cyst. A small cyst may exist, so insignificant in size that it cannot be felt through the abdominal wall, and the patient may be entirely ignorant of its presence. Let that cyst be rotated half way round. There is now strangulation. The blood enters the cyst through the arteries but cannot escape freely through the veins of the twisted pedicle. A hornet's nest, stirred up with a stick, is symbolic of the peace of the simple life compared with the fury and hurricane that follows such a twist of the pedicle. Pain, suffering, interference with every function of the woman's body, quickly follow; bowels and kidney are almost put out of commission, while the tumor, or cyst, grows, and in the course of two or three weeks, may be found by the operating surgeon to weigh twenty-five or thirty pounds. It is adherent to everything near it, and its career has been a tempest of woe.

The other day, in a report of the Boston City Hospital, I noticed reference to an article by Dr. Clute, on, Torsion of the Spermatic Cord. I read the article with a great deal of interest, for it shows the association of torsion of the spermatic cord with that which I had been studying in connection with the uterus. A simple turn once around of the cord is enough to cause violent pain, swelling of the testicle, and a very severe condition of things, until an operation relieves the trouble.

On January 6, 1921, an article, by Dr. S. S. Dearborn, appeared in the BOSTON MEDICAL AND SURGICAL JOURNAL on, "Torsion of the Fallopian Tube," which further illustrated the violent results of an obstructed venous circulation. In these cases, untwisting is impossible; the only remedy is an operation, to undo the twist and relieve the distress. In the case of the uterus, however, we are lucky in being able to relieve the situation by simple elevation of the uterus and restoration of the normal circulation.

My thesis, therefore, is as follows: Mechanical obstruction to the escape of the venous blood from the uterus and the back-water congestion produced thereby, are as destructive to the health and function of that organ, as like obstruction is destructive to the other organs mentioned above.

When a woman has received a fall or been thrown or jarred in riding over rough roads, the condition of congestion does not develop instantly; it is not like a broken bone. She may not be conscious of the prolapse of the uterus for several days, until the congested condition described above has had time to develop. The following cases will illustrate my meaning:

A large, stout woman, weighing nearly 200 pounds, wanted to shoot the chutes. She took her place on the front seat of the sled. As you know, this sled comes down the chute with great speed, strikes the surface of the water, and the front end rises up and then falls back with a blow on the water that shakes the whole building. The woman, sitting on the front seat, received the full force of this blow. In about three days, she sent for me, and I found her uterus driven down into the pelvis, and she was in great pain. I placed her in the knee-chest position and put the uterus into place. She was perfectly well afterwards.

A young woman, 18 years of age, was standing on her lawn, when a dog ran behind her and knocked her feet from under her. She sat down with considerable violence. In a short

time, she began to suffer with pain and distress, and prolapse, with retroversion, was found. Her distress was relieved by lifting the uterus up, but was liable to recur at intervals. Sometimes she would pass several months in comfort; then the uterus would drop again, and pain and distress come on. Finally, she was relieved by an Alexander operation.

In 1877, a course of lectures on "The Mechanical System of Uterine Pathology" was delivered before the Harvian Society of London by Dr. Grailey Hewitt, Professor of Midwifery and Diseases of Women, University of London. The report of these lectures may be obtained at our Medical Library, for full description. Dr. Hewitt propounds the theory that the mechanical cause of the suffering in these cases is due to flexion of the uterus and nerve pressure at the seat of the flexion, which produces the pain and distress and other nervous reflexes which are associated with this group of diseases. I have not space here to properly present all his arguments; they can be found in the profusely illustrated article referred to above.

I wish, now, merely to call attention to this fact: In my cases, no attempt was ever made to change or disturb the condition of flexion which might be present. I never used any instrument to straighten out the flexion. I simply ignored it and elevated the uterus in the knee-chest position, with as little force as possible, largely depending upon gravitation to assist me. Moreover, the small pessary subsequently used to support the uterus could have no possible influence upon the flexion. The relief of subjective discomforts was always coincident with restoration of circulation as indicated by the behavior of the organs themselves. But the process of cure in these cases was also coincident with the diminution of congested enlargement, with retraction of relaxed annexes of the uterus, and with the ability of the uterus to retain its normal position and its normal circulation, unless thrown down again by some subsequent accident.

I have at present under my treatment three women, each about 80 years of age. They came to me with complaint of severe backache, inability to walk about and attend to their usual affairs. I replaced the uterus and held it at an elevation by means of the cupped pessary with a short, curved stem. This pessary, as is well known, is held in position by small elastic tubes passed through eyes in the lower end of the stem, and attached, in front and behind, to a band. These women are able to remove these instruments for purposes of cleanliness, and to replace them themselves, and when the uterus is thus held in position, they continue to perform their daily duties in comfort.

THE NEW SARGENT BODY-TEST.

By George Van Ness Dearborn, M.D., Cambridge, Mass.,

Boston City Hospital.

In *School and Society* for January 29, 1921, is the preliminary account of a new, simple, and single test of an individual's general motor efficiency, conceived and developed by Dudley Allen Sargent, "dean" of American physical educators. To every physician it is bound to be not only of theoretic interest but occasionally, at least, of much practical utility. The sooner it is generally known, tried out, appreciated, and adopted in habitual use, the better for all concerned. It seems to comprise a test of much in little time, much more, indeed, than any other single test known to the present writer. Let Doctor Sargent, for forty years so well known at Harvard, tell of his dynamic device in his own words (excerpted from the seven-page article):

"In popular estimation, it takes so many inches and so many pounds and a certain size chest girth to make a man, and this estimation is borne out largely by experience. Hence, the universal interest in the physical measurements of the human body. However, those of us who are engaged in making physical measurements of men by the thousand soon learn the limitations of the information which comes to us from this source alone. While it is true that the strength and functional capacity of a part generally increases with the size of that part, other things being equal, the number of cases where other things are not equal is so numerous that the generalization should be greatly modified.

"The measurements alone do not tell us anything of the texture and quality of the parts covered, *i. e.*, how much fat or bone, and how much muscle, nor do the measurements alone give us any information of the innervation of the parts upon which power and efficiency so frequently depend. Even if we accept the

physical measurements of a man as an indication of his potential power, so many of us almost intuitively do, we are soon taught by experience that *there is in many men an unknown equation which makes for power and efficiency which has never been determined and which can only be measured by an actual test.*

"The important question is, what is this unknown equation and how can it be simply and practically tested and numerically expressed? With a good many others, I have been wrestling with this problem for years by the way of strength tests, endurance tests, speed tests, etc., but have never come across any one that satisfied me or quite met the demands of the situation.

"It is said that every pioneer, or inventor, or discoverer, if he lives long enough, goes through three stages in his career. The first one is where his propositions are unfounded and absurd; the second stage is where, if proven true, they are not original; and the third stage is where they are so self-evident that any fool ought to have thought of them. I have now arrived at the third stage in my career, and want to share what seems to me the simplest and most effective of all tests of physical disability with the other fools who have been looking for one.

"I have dwelt at some length upon gravity as a constant force to be overcome and its relation to the height and weight and other measurements of the body. The new test that I offer consists of using the constant factors of height and weight which one always has with him, in a little different way than is commonly thought of. It is so simple, and yet so effective for testing the strongest man or the weakest woman or child, that one feels almost like apologizing to the general public for mentioning it.

THE NEW TEST.

"The individual to be tested stands under a cardboard disk, or paper box cover, heavy and stiff enough to hold its form, about twelve inches in diameter, held or suspended from ten to twenty or more inches above his head. He is then requested to bend forward, flexing the trunk, knees and ankles, and then, by a powerful jump upward, straightening the legs and spine, to try to touch the cardboard disk with the top of the head. Swinging the bent arms forward and upward at the time the legs, back and neck are extended, will be found to add to the height of the jump. When the disk has been placed at the highest point above the head that can be just touched in jumping, this height is measured. The difference between this height and that of the total stature is, of course, the height actually jumped."

* * *

If, then, in the new test, we multiply the total weight by the height jumped, and divide this product by the total height of the person in inches, the result will give a fair index of the effort made in the smallest number of figures. This is always an advantage in making a test and handling the data for statistical purposes.

Thus, if the individual tested weighed 150 pounds and jumped 20 inches above his head, and was 70 inches tall, the formula for his efficiency would be as follows:

$$\text{Index} = \frac{\text{Weight x Jump}}{\text{Height or stature}} = \frac{150 \times 20}{70} = 42.8"$$

Both as a reformed physiologist and as instructor in the physiology of exercise for the last twelve years in the Harvard Summer School (as well as elsewhere), the present writer has tried his humble best to see some theoretical fault with the Sargent body-test, claiming to be so much in so little even to almost the *proba optima* of human all-round dynamism. One looking for trouble usually finds it, and I am suggesting that this index should be in metric terms rather than in the clumsy and uncouth scale of our ancestors. Furthermore, the test, fundamentally a ponderal index, puts inexpedient eugenic premium on the short, stocky and over-weighted *format* of the human volume in contrast with the "Uncle Sam" type. Undoubtedly, it is to the former shape that real, unhyphenated, *i.e.*, permanent, Americans are rapidly tending, and this test would help to show them to be apparently physically superior—which hygienically and esthetically, humanly, speaking, they are not. By this test, the young, short, thick-set athlete shows his great superiority to the tall and thin, arthritic and sclerotic person at middle age, rather more than the ideal, hygienic status would warrant. Age hath its sanitary victories no less renowned than youth. But this, of course, is not primarily a hygienic test, nor does it claim to be. Lastly, there might be a light recording pen-lever attached to the head that would be self-recording and so less crude mechanically.

Aside from these really minor, because morphologic and accidental, implications, this test, in the language of the dormitory, "looks pretty good" to me. I am, probably, even a bit chagrined that so simple and comprehensive an idea did not seep down through my own archepallium.

This "stunt" not only measures the effective power of most of the essential muscles of the body (the so-called ambulatory muscles are two-thirds of all the muscle), and the person's mental and nervous dynamism ("pep" momentarily is the academic slang), but it automatically compensates differences both in weight and in stature in a remarkably perfect, scientific way. The fat man, for example, often makes a low rating, as he deserves to make; while the "wiry" woman (wiry in the physiological rather than the psychological, sense) makes a high mark as part of her reward of merit in denying herself the forbidden fruit of the chocolate tree, etc. The child and the senescent, the tall and the short, even the cardiopath and the pneumopath (if the index be done at once, repeatedly), are tested with equal accuracy. Quite the proper penalty is imposed on chronic arthritis, sclerosis, and "muscle binding"; and on clumsiness. And the abulic, the hysteric, the neurasthenic get the rating that would seem to belong to their enforced lack of dynamic endeavor.

The end of Dudley Sargent's preliminary report reads as follows:

"I think, therefore, that the test as a whole may be considered as a momentary try-out of one's *strength, speed, energy, and dexterity combined*, which, in my opinion, furnishes a fair physical test of a man and solves in a simply way his unknown equation as determined potentially by his height and weight. It will be observed that the parts tested, namely, the muscles of the feet, calves, thighs, buttocks, back, neck, anterior deltoid, chest and biceps, are the muscles most used in all forms of athletics, sports, track and field games, setting up exercises, posture drills, etc., and are of fundamental importance in all the active industries. For this reason, I think it should precede any other all-round physical test in basic value.

"In presenting this paper for discussion, I have intentionally narrowed myself down to a consideration of the factors involved in making the test, omitting the experience that has led up to it, and the application that may be made of it, and the method of conducting it.

"To those who wish to try the experiment, I would suggest that the jump be made in gymnasium slippers or, at least, in shoes with low heels, and as the factors, weight, height and height jumped are to be multiplied and divided in the calculation, that all the measurements be made with the greatest accuracy.

"If the test is of any value, then the standardization of it, and the collection of different data concerning it will, of course, be of the greatest importance, and follow naturally for the benefit of those who want to make use of it."

Unless my cortical synapses are worse awry than usual (which Æsculapius forbid), this test of the psychophysical individual at any moment has in it the simplicity-in-completeness indicative of "inspiration." None the less, the proof of this pudding, too, is in the eating thereof, unless and until caliometric measurement of the metabolism involved shall more promptly establish its comprehensiveness, as surely it would do.

Meanwhile, I understand that the suggestor of the test is arranging to give the public, and especially the medical public, early opportunity to try it out personally and to examine the data already accumulated (in part from the Harvard faculty) in the light of several other related circumstances. The procedure is a simple one and may readily and quickly be carried out in any physician's office. "Knocks and boosts" and other contributions would help to set the actual status of this new index of personal efficiency,—that is, on an empirical instead of on a purely theoretic basis. It is hoped that many will jump at the opportunity.

GOITRE.*

By Joseph Stanton, M.D., Boston.
Visiting Surgeon, St. Elizabeth's Hospital.

It is true that a goitre is any enlargement of the thyroid gland. The physiological enlargements of puberty and pregnancy are familiar to you all and are of no particular interest in this discussion, for it is with the surgical aspects of goitre that we are particularly concerned.

We may divide goitres into two classes, the

* Read before the South Boston Medical Society at its December meeting.

simple and the toxic. The former is simply an enlargement of the gland, which may be glandular or cystic. It presents no symptoms unless large enough to produce pressure with partial or complete paralysis of the recurrent laryngeal nerve, or necrosis of the tracheal cartilages with accompanying cough or dyspnoea. Their removal is comparatively simple and the mortality is practically *nil*.

The latter is a much more complicated surgical problem and embraces the so-called toxic adenomata, so clearly brought out by the studies of Dr. Plummer of the Mayo Clinic, and the so-called exophthalmic cases with which you are all familiar.

About 50% of all the cases of hyperthyroidism have exophthalmos. Of all the glands of internal secretion, if we exclude the ovary which is primarily a generative organ, the thyroid remains the most easily accessible. Its diseases have been more carefully studied, and surgical measures for their relief are better perfected than for the relief of disturbances of any of the other glands which make up the so-called endocrinous system.

Its inter-relation with the thymus, the adrenal, the ovary is presented to you in your every-day practice. The disturbances of the menopause show the close relation of the thyroid, adrenal and ovary. As the ovary becomes less active, its glandular tissues become replaced by cystic and fibrous tissues. An increase of the adipose tissue is the result when the ovary or thyroid become less active. This lack of balance of these two glands is frequently accompanied by a rise of blood pressure.

Changes in the functions of any of these organs of the body; those in the thymus accompanying disturbances in the thyroid; hence the importance of x-raying cases of goitre to eliminate the possibility of an enlarged thymus with a status lymphaticus, which has been the cause of death in certain goitre operations.

EMBRYOLOGY.

The thyroid is developed from the ectoderm which goes to make up the tissues of the pharynx. The upper cleft divides into an anterior and posterior part: the former making up the thyroid and the latter the anterior lobe of the hypophysis or petuitary body. This development from the same portion of the embryonic structure offers an explanation of the inter-relation of the anterior lobe and the thyroid.

During the early period of embryonic development the gland descends from the pharynx and becomes located in its normal position in front of the second, third and fourth tracheal rings, developing as a central mass from which the lateral lobes develop on each side of the trachea. Occasionally as the gland descends from the pharynx, segments may become detached and later develop and give us the lingual goitres, or those little fragments of the gland which discharge colloid material through a sinus on the neck and require such extensive dissections to produce a cure.

ETIOLOGY

This still remains obscure. The prevalence of goitres in certain sections of the world would lead one to believe that the water supply must be at least a contributing factor in producing disturbances in the structure and functions of this gland.

The marked diminution occasionally observed after the removal of infected tonsils tends to prove that focal infections have something to to with hyperthyroidism. The administration of iodine in certain cases will produce a decrease in size showing the low iodine content in some goitre patients.

The sudden enlargement sometimes noticed after a profound nervous shock shows how sensitively the sympathetic nervous system is related to this gland.

Symptoms of hyperthyroidism are self-evident in the majority of cases; the palpitation usually the first to attract the patient's attention, the tremor visible in the fingers and the tongue, the redness and perspiration on the skin, and the enlargement of the neck. This last symptom is best brought into view by extending the head and asking the patient to swallow.

The toxicity of the gland is not dependent upon the amount of the enlargement. In the exophthalmic cases, the bulging of the eyes varies according to the severity and duration of the disease. Vomiting, diarrhea and oedemia occur only in the severe cases in a critical stage, where operations of any kind are dangerous. Pruritus is occasionally very marked. I had one patient, where the itching was so intense that one would mistake it for scabies.

Basal metabolism is much increased, being

sometimes A + 90. The higher the metabolism rate, the more severe the case and the greater the operative risk.

TREATMENT.

The mild cases of toxic goitre sometimes yield to long periods of rest and simple life. Those, with well established symptoms, particularly the exophthalmic cases, are proper subjects for surgery. Any mild toxic case may become toxic years and years after the onset of the disease, and it is far better to operate early than to wait until serious organic changes have taken place in the vital organs of the body, particularly in the muscular structure of the heart.

The exophthalmic cases are much more frequent in the female than in the male, and appear most frequently at about thirty years of age.

All operative cases should be given a period of rest in bed, with ice applied to the neck and freedom from all psychic disturbance. Small doses of morphia and belladonna should be taken to slow down the metabolism. Digitalis is a useful drug to lessen the action of the heart, which is so annoying at times. The slower the heart and the lower the basal metabolism, the safer the operative risk.

If the pulse is continuously under 120 and the basal metabolism is under ± 30, it is safe to perform a radical operation. If the pulse is continuously over 120, and the basal metabolism over + 30, it is far better to do a preliminary ligation or use injections of boiling water in order to bring the patient into the zone of safety.

When one has to decide what to do in the individual case, he must use his surgical sense. The extremely toxic patient, rapidly losing weight, is a poor surgical risk. The two-stage operation has decreased the operative mortality in many other diseases, and, I am sure, will in the future lower the mortality of this disease.

The x-ray has been of doubtful value in the treatment of toxic goitre. Hydro-bromide of quinine is of little, if any, value. The improvement sometimes seen during its administration may be explained by the natural improvement evident from time to time in the course of the disease. This particular one seems to progress in cycles, similar to pernicious anaemia.

I have found injections of boiling water, as advocated by Dr. Porter of Fort Wayne, Indiana, of great value in bringing six cases of the very toxic exophthalmic type into the zone of safety, so that I was able to do a radical operation at one sitting.

The technique is very simple: freeze or cocainize the skin over either lobe, and with a hot syringe filled with boiling water, inject from 2 to 6 cc., according to the size of the gland. This destroys a certain amount of the gland and lowers the amount of toxic poured into the blood stream. Four to six injections usually suffice.

Primary ligation should be done in the extremely toxic cases under local anaesthesia, ligating one side at a time, and including nerves, blood vessels and lymphatics, as advocated by Dr. Charles Mayo. From one to six months should elapse before a resection is done, depending on the rate of improvement after the primary ligation.

By a process of slow evolution in the surgical treatment of hyperthyroidism, we have learned that the failure to cure many cases in the past was due to the removal of too little of the gland. From two-thirds to five-sixths of the gland should be removed, according to the toxicity of the case. If the greater part of both lobes is removed and a thin layer left with the posterior capsule, no damage will be done to the parathyroid, and sufficient gland will be left to maintain normal metabolism.

No isthmus should be left, for it is almost sure to develop and produce a noticeable and troublesome deformity.

OPERATION.

The operation itself is comparatively simple. The anaesthesia varies, according to the choice of the individual surgeon. Some use ether exclusively; others, nitrous oxide, while a third group prefer local anaesthesia.

The method which I have found most satisfactory is as follows: Morphia in sufficient dosage is administered subcutaneously to produce drowsiness. It is important to begin the administration of this about three hours before the time set for the operation. I repeat the dosage quantity to produce results in the individual case.

The patient is then placed in an upright position on the operating table, and the line of in-

cision in a wrinkle at the base of the neck is infiltrated with 1% novocaine. The skin is incised together with fat platysma and fascia. Flaps involving these structures are then turned up and down, and the sterno-hyoid and sterno-thyroid muscles and the deep fascias are exposed. The latter is incised in the median line and this, with the extrinsic muscles of the larynx, is retracted on either side. In case of large tumors these muscles have been stretched so that it is rarely necessary to cut any of the muscle fibres.

The gland is exposed and lifted from its bed and removed, leaving the posterior capsules with a thin layer of gland and the parathyroid bodies. The isthmus should always be removed for reasons already mentioned.

A small cigarette drain should always be left in to drain the blood and free thyroid material. The fascia is closed in the median line, and the skin flap with two rows of sutures, to prevent the spreading of the scar, which is hardly noticeable, if made in a wrinkle at the base of the neck, instead of over the most prominent part of the tumor. I usually use a No. 1 plain catgut subcutaneous suture, which does not have to be removed, and makes a very little scar.

In a series of 208 operations on the thyroid gland, 80% of which were for hyperthyroidism, the mortality has been a little less than 2%. Two of the fatal cases died within twelve hours of acute hyperthyroidism, while a third passed away with acute abdominal disturbance, suggestive of mesenteric thrombosis.

I think local anaesthesia, with morphine necrosis, the selection of the proper time for operation in the individual case, resorting to palliative operations or injections of boiling water in order to prepare the patient for a radical removal, and finally, the removal of sufficient gland, are the three important steps in the progress of thyroid surgery during the past decade.

The full time health officer is an asset to the community in which he serves. On the other hand, the part time health officer is a joke, as a rule. For, though he may be trained in public health work, he cannot give efficient service on a wage that would scarcely pay his office rent. As a matter of fact, most part time health officers do give an immense amount of service far in excess of that for which they are supposed to be paid. But as their bread and butter must come from the earnings they make in their private practice, naturally, the practice is given first place. Public health work today, rightly performed, is only the intensive application of that now generally accepted doctrine. And as health is the most important thing in the world, the prevention of needless sickness and deaths naturally becomes also of first importance.

Here are some figures from the *Journal of the American Medical Association*, which show substantial balances on the credit side of the health ledgers of the cities named. These figures show the death rate per year for each 100,000 inhabitants in the twelve largest cities in the United States from typhoid fever for 1910 and 1920. Note the reductions:

City	1910	1920
Pittsburgh	65.0	2.7
Philadelphia	41.7	3.3
Baltimore	35.1	4.7
San Francisco	27.3	3.1
Buffalo	22.8	5.1
Detroit	21.1	5.1
Los Angeles	19.0	2.6
Boston	16.0	1.5
Chicago	15.8	1.1
Cleveland	15.7	3.2
St. Louis	14.7	2.7
New York	13.5	2.4

—*Chicago School of Sanitary Science*

THE A B C OF RADIUM.

By Ernest M. Deland, M.D., Boston.

[From the Collis P. Huntington Memorial Hospital.]

THE PHYSICS OF RADIUM.

Radium is a metal of the alkaline earth family, similar in its properties to barium. Its atomic weight is 226. The metal radium has been isolated in very minute quantities, but it has no use in therapeutics. It occurs in nature in the salts, radium sulphate, radium chloride and radium bromide, which are in combination with uranium compounds in the form of pitchblende. In 1896, it was discovered that when pitchblende was placed near photographic plates, it affected the plate in the same way that light does. Bequerel described the phenomenon, and the rays were accordingly called "Bequerel rays." Radium was discovered in uraniaum ores (pitchblende) by Monsieur and Madame Curie, in 1898. Since that time, the Curie Institute in Paris has taken an important place in radium research.

The chief deposits of uranium ores in this country are in Colorado and Utah, in the form of carnotite. Previous to 1914, large quantities of this ore were sent to Germany and there

the radium was extracted. Since the beginning of the war, the methods of extraction have been perfected in this country, chiefly at Pittsburg. Formerly it was necessary to export two hundred tons of carnotite (containing 2% of uranium oxide) to obtain one gram of radium element. Lower grade ores are used now where transportation distances are shorter.

The old alchemists endeavored to effect a change from one element to another. Modern chemists ridiculed their efforts, but the whole study of radioactivity is one of changing from one element to another. These changes are automatic and go on without the aid of man. Our old definition of atom is now old-fashioned. The atom as defined today consists of a minute nucleus made up of + and — electrons and an outer system of negative electrons held in equilibrium. The electrons of the outer circle are easily altered in arrangement, but those of the nucleus cannot be changed. Certain atoms are continually exploding, resulting in a rearrangement of the electrons in the inner and outer systems. These atoms are radioactive.

In radiotherapy, we are dealing with three kinds of radiations: the alpha particle is the nucleus of a helium atom (at. wt. 4) with two + charges of electricity; beta particles are negative electrons of enormous velocity; gamma rays are similar to x-rays, but are more penetrating.

TABLE 1.

Element	Radiation	½ Value Period	Atomic Wt.
Uranium 1	alpha	5,500,000,000 years	238
Uranium X_1	beta & gamma	24.6 years	234
Uranium X_2	beta	1.15 minutes	234
Uranium 2	alpha	2,100,000 years	234
Ionium	alpha	140,000 years	230
Radium	alpha	1,730 years	226
Radium Emanation	alpha	3.85 days	222
Radium A	alpha	3 minutes	218
Radium B	beta & gamma	26.7 minutes	214
Radium C	beta & gamma	19.5 minutes	214
Radium C_2	alpha	1 / 1,000,000 second	214
Radium D	beta	15.83 years	210
Radium E	beta & gamma	48.5 days	210
Radium F (polonium)	alpha	136 days	206
End (radium lead)			

Note in Table 1 that radium is derived from uranium by a series of steps. Each element in the series gives off rays. Those giving off alpha rays lose 4 from their atomic weight. Four is the atomic weight of helium, of which atom the alpha particle is the nucleus. The time required for each element to lose one-half its value varies from a few seconds to many years. That of radium is 1730 years, while that of radium emanation is but 3.85 days. Radium itself changes into radium emanation and then into other elements (Radium A, B, C, etc.). The final product is radium lead, the atomic weight of which differs by a fraction of a per cent. from that of ordinary lead. It has the same chemical properties as lead and is an isotone of that metal.

There comes a time when the number of atoms of radium emanation disintegrating per second equals the number of atoms of radium changing per second,—there is then equilibrium between them. There is equilibrium between radium and its disintegration products in the deposits of carnotite ore found in nature. In the commercial applicator of radium salt, with its varnished surface, there is an equilibrium between the radium products. In these, it is not the radium or the emanation which is so radioactive, but the radium A, B and C, all solids. When radium emanation is used, we are one step nearer these elements (see table).

RADIUM EMANATION.

Radium emanation is a gas, giving off alpha particles. The curie, the unit of measure, named from Monsieur and Madame Curie, is the amount of emanation in equilibrium with one gram of radium element,—a millicurie, with a milligram of radium. In collecting the emanation from radium bromide in solution, the gas is passed over a hot copper wire. This combines the hydrogen and oxygen in the form of water, which is absorbed by phosphorus pentoxide. The CO_2 present is absorbed by potassium hydroxide. The purified emanation is then pumped in a vacuum into a long capillary glass tube. This is then cut up into the desired lengths for use. The apparatus for the preparation of emanation was first devised by Dr. William Duane of the Huntington Hospital.

The emanation when collected in these tiny glass tubes, at first has very little radioactive strength. Immediately, however, Radium A,

B and C are deposited on the walls of the tube and the tube becomes radioactive. After three hours, a tube can be measured. The measurement of emanation is made possible by the fact that emanation ionizes gases. If a tube is placed between two insulated metallic plates and a current applied, the flow of the current may be measured by the galvanometer. Emanation, rather than radium salt, has been used entirely at the Huntington Hospital for the past six or seven years.

THE TECHNIQUE OF RADIUM THERAPY.

The complicated technique of radiotherapy depends on the fact that alpha beta and gamma rays vary in their penetrating powers. A thin layer of radium lying in a dish gives off 90% alpha, 5% beta, and 5% gamma particles. Alpha rays are easily absorbed and have very little penetrating power. If radium salt or the emanation is placed in a thin glass tube, practically every alpha particle is absorbed by the tube. The radiation from this tube is then about equally beta and gamma radiation. In a varnished applicator, if the varnish is very thin, there is some alpha radiation, but the alpha ray plays a very little part in radiotherapy.

Beta rays are made up of short and long rays, all of which are more penetrating than alpha rays. Glass emanation tubes laid on a surface have a very powerful effect on the surface and but little on the deeper structures. This is the type of radiation needed for a very thin, superficial epithelioma. If the glass emanation tube is placed inside of a hollow steel tube one-fourth mm. in thickness, the more caustic soft beta rays are absorbed. This is the type of tube commonly used in our applicators. Into one end of this steel jacket is screwed a cap which bears a letter stamped with a die. In the other is screwed a point. The latter is useful in inserting the steel tube into a growth or into another applicator. The letter on the cap serves to identify the tube and thus, by reference to the table of measurements for the day, to tell its strength. For vigorous radiation, as in treating an infiltrating epithelioma, this type of tube is used in direct contact with the tissues. The erythema or the slough from such a treatment takes on an oval shape because of the shape of the emanation tube. If the lesion to be treated is circular, this is a disadvantage. This difficulty is avoided by placing the tube on a round brass cone 1 cm. in height. The brass keeps the rays within the cone and the reaction on the tissue is then circular. Experiments by Dr. Bovie with photographic paper have shown that such radiation affects all parts of the area equally. However, a heavier dose is required because of the distance from the growth.

A filter of two millimeters of lead cuts off practically all the beta rays and allows only the gamma rays to pass through. Such an applicator is used for the treatment of deeper structures, where it is not desirable to cause destruction of the skin. Doses of this type are given over glands, the spleen, or deep metastases. Gamma rays are very penetrating, and closely resemble the x-rays. They are not particles of matter, as are the alpha rays, but pulsations of the ether. Gamma rays have very little effect on the skin. A filter of silver, 1 mm. in thickness, may also be used to cut off the beta radiation. This is a convenient applicator for the treatment of naevi. It is also used around the periphery of epitheliomata in what we term a "prophylactic" treatment.

Cancer tissue of the squamous-cell or glandular-cell type can be retarded in its growth by heavy doses of filtered radiation, but unless a dosage is given sufficient to destroy the whole mass and produce a slough, there is usually a recurrence. Such a destruction of a tumor mass may be accomplished by radiating with gamma rays, the filter cutting off the beta rays, or by a combination of beta and gamma radiation. Beta rays are absorbed by a comparatively thin layer of tissue, while gamma rays pass further toward the periphery. To have the same amount of gamma radiation absorbed in the thin layer of tissue, it is necessary to have many times the dosage used in beta and gamma radiation. For equal amounts of energy absorbed, the effects of beta and gamma rays are apparently the same. For the best economic use of radium or emanation, it is desirable to depend on the beta radiation to produce the most sloughing effect.

During the past few years we have used tiny glass tubes of emanations for the treatment of large growths or tumors which are inaccessible for ordinary treatments. The Huntington Hospital was the first to use this method of treatment. Tubes of from one to eight millicuries are inserted into the growths with trocars, and allowed to remain. As the emanation loses one-sixth of its strength each day, these are "dead"

in a few days. They then slough out of their own accord. If they remain in the tissues, there is no harmful effect. A tube measuring one millicurie, if it stays in situ, gives a radiation totalling 132 millicurie hours before the tube becomes worthless. A two-millicurie tube gives 264 millicuries hours, and so on. The best results are obtained by using several tubes of one to two millicuries placed about 1 cm. apart. Tubes of this size are sufficient to destroy the tissue immediately adjoining, by their beta radiation. The volume of tissue actually destroyed is not proportional to the strength of the tube, the chief benefit from the larger tube being in the increased penetrating radiation, although the area of necrosis is slightly enlarged. Tubes larger than four or five millicuries cannot be used in a tumor unless drainage is instituted. Thus, in a large ulcerated cauliflower mass, where there is a means of egress for the slough, tubes as high as seven or eight millicuries may be used. In closed, encapsulated masses, large doses cannot be given without sooner or later giving a chance for drainage.

THE NATURE OF RADIATION.

Now as to the nature of radiation. The cells of a malignant growth are embryonic. They are peculiarly affected by radiation, being from two to seven times as sensitive to radiation as normal tissues, so that they are destroyed more easily.

Microscopically, no change can be noted in epithelial cells radiated from a distance, that is, by gamma radiation. However, there is an increase in the surrounding connective tissue. This has led some writers to think that this evidence was sufficient to prove that the final effect on the epithelial cells was caused entirely by a blocking of the blood vessels, a consequent loss of nutrition to the cells, and finally, death of the cells. This theory is not generally accepted as explaining the entire phenomenon of radiation.

Probably the most generally accepted theory among biophysicists is that radiation causes an ionization of the tissues which is similar to the ionization brought about by the radiation of gases. The resulting effect on the tissues is a gradual one, the rapidity varying in direct proportion to the dosage.

This change in the tissues has been likened to the changes made in a photographic plate by light, for there, the more intense the light, the greater the effect on the silver salts of the plate. Once the exposure of the silver salt has been made, there is no further change in the plate until it is "developed," at which time the different degrees of light from the original object are brought out.

Similarly, there is a latent time after radiation until the process of "development" goes on. The exact nature of this development in the tissues, we do not know. We do know that light causes definite biochemical and physical changes in protoplasm. Bovie has shown that heat is one of the agents in bringing out the effects of radiation. He has shown that if egg albumin is exposed to the ultra-violet light at 0° C., there is no effect; but if the albumin is raised to room temperature after radiation by this light, the protoplasm coagulates.

It seems probable that the chief effect of radium is exerted on the nuclei of the cells and that the cell is most susceptible during the stage of mitosis. The theory has been advanced that the greater the proportion of nuclei to the cytoplasm, the greater the effect of radium on the cells. It is well known that the small, round-cell sarcoma, or lymphosarcoma, is very quickly effected by radiation.

The effect on a tumor when a small tube of emanation is inserted into it is quite different from treatment at a distance. At the end of ten or fourteen days, there is an area of complete necrosis surrounding the tube. Outside of this zone of necrosis, there is an area in which there is swelling of the epithelial cells, vacuolation, and oedema of the cytoplasm, and amitosis, hypochromatism and karyorrhexis of the nuclei. Accompanying this, there is capillary congestion, infiltration by lymphocytes and leucocytes, and around the periphery further infiltration by fibroblasts. All these changes occur over an area one or two centimeters in diameter. The central necrosis is the effect from beta and gamma radiation, while the peripheral changes are due to the gamma effect alone. Without doubt, some of the epithelial cells around the periphery have been damaged to such an extent that they will die; others may have been more resistant, possibly more mature, and they stop their mitoses for a time, only to continue after the effect of radiation has worn off. Indeed, clinical experience has shown that the late effect on some of these cells is one of stimulation.

It is the policy of the Huntington Hospital to treat no cases with radium which may be treated equally well, or better, with x-ray. This is due to the scarcity and high cost of radium. The Hospital has about one gram of radium element, nearly all of which is used to produce emanation tubes. Cancer of the thyroid and breast, exophthalmic goitre, enlarged thymus, and certain other conditions show as good results with x-ray. Certain of our cases are treated with a combination radium and x-ray therapy.

THE ADVANTAGES OF RADIUM.

What, then, are the advantages of radium? (1) It has greater penetrating power, particularly the gamma rays. (2) It may be applied to smaller areas than the x-ray. (3) It is more easily applied to certain internal organs, as the bladder and uterus. (4) It is easier to transport than an x-ray machine. (5) It may be inserted inside tumors. (6) The source of the rays is much more accurately placed.

Radium emanation is used instead of the salt because of the ease with which it can be adapted to different types of applicators. The loss of a tube is a small matter, because of the low value of the emanation. However, the use of emanation requires the use of a large amount of radium (at least half a gram), an expensive plant for its production, and the employment of trained men for the upkeep of the plant.

THE CLINICAL USE OF RADIUM.

The large majority of superficial epitheliomata are successfully treated with radium. A lesion on the forehead, neck or face may be excised, if desirable, but lesions on the eyelids, inner canthus or nose are better treated with radium, for there is less deformity. Large lesions are often excised, cauterized, and radiated afterward, if necessary. Excision of these lesions for the purpose of having a pathological examination is not important. They are the type that metastasize very late in the disease, if at all, so that the removal of glands does not have to be contemplated. Epithelomata of the ear does not respond as readily as others, partly because a smaller dose must be given. The cartilage is easily destroyed if a heavy treatment is given. This type occasionally does metastasize to the neck.

Keratoses of the face are easily destroyed by radium. Keratoses and precancerous lesions of the lips are also easily destroyed. However, it is our policy to treat with radium nothing but the earliest keratoses of the lip, except for palliation, in cases clearly inoperable. All cancers of the lip, or suspicious keratoses, should be excised by a V-shaped excision, the specimen examined, and a neck dissection done if indicated. These lesions metastasize to the neck very early, and the only safe way is to do the complete operation.

Cancer of the tongue (if inoperable), floor of the mouth, and tonsils, are treated by the insertion of emanation tubes. Relief of symptoms usually follows, and occasionally an apparent cure. However, the neck metastases, if they appear, are not easily affected by radiation. X-rays seem to have more effect than radium.

Many cases of leukoplakia are relieved by radium. These are probably treated equally well by fulguration.

In cancer of the antrum, combined operation and radium treatment is the method of choice. The radium should be applied at the time of operation, after all the gross cancer has been removed.

Cancer of the oesophagus does not do well under any form of treatment. Some cases are relieved by one or two radium treatments, but this is only temporary. In order to destroy the cancer, a treatment heavy enough to cause a severe reaction is necessary. This reaction is often serious enough to cause complete obstruction. Frequently the growth extends into the glands of the mediastinum and cannot be reached.

Radium has no value, either curative or palliative, in the treatment of cancers of the stomach or intestines.

Rectal cancer should never be treated with radium if it is operable. If inoperable, a colostomy should precede treatment. Otherwise the pain and tenesmus resulting from the necessarily heavy radiation are very severe—far worse than the discomfort of a colostomy.

Cancer of the breast, if inoperable, is best treated by x-ray. In some clinics radium is used, but a very large amount is needed to get the same results given by x-ray. Local implantations may be used to destroy some of the nodules, but this does not take care of the glands.

Cancer of the thyroid may be treated by the

insertion of emanation tubes, but x-ray is probably better.

Many cases of cancer of the larynx are relieved by radium therapy, but few permanently. Combined operation and radium works well in certain cases. Necrosis of the laryngeal cartilage must be guarded against. Tracheotomy must precede treatment, otherwise the reaction may complete the obstruction.

Prostatic cancer may be treated by the insertion method through the peritoneum or by the intraurethral route. Probably the best results are by the combined operative and radium method. Results, as a rule, are not very good.

Opening of the bladder and the insertion of emanation tubes is the best way to treat vesical cancers, although they may be treated by the use of cystoscope and by applicators inserted in that way. Female bladders are more easily treated than those of the male.

Cancer of the uterine fundus is best treated by hysterectomy. If hysterestomy is contraindicated, good results are secured by intrauterine radium treatments.

In cancer of the cervix which involves the broad ligaments or encroaches on the vaginal wall and is therefore inoperable, the treatment of choice is the insertion of numerous tubes into the cervical growth, combined with steel-screened intrauterine radium treatments. Preliminary cauterization is not advisable, for the cauterization accomplishes no more than the radium, and if done at a separate sitting, it involves a loss of time. Treatment by the former method promises good results. Nearly every patient is relieved of pain, bleeding and discharge, and some are clinically cured by radium. Cancer of the vulva and vagina is treated by insertions.

Large fibroids of the uterus should be removed by operation, if operation is not contraindicated. Many smaller fibroids are relieved by intrauterine radium therapy. Relief is also given to certain obscure cases of menorrhagia.

Keloids respond readily to radiation. It has been found that they disappear more quickly if a moderately heavy treatment is given rather than a heavily screened treatment.

Cavernous naevi are easily destroyed, but port wine marks are more resistant, requiring numerous treatments. Hairy and pigmented naevi respond fairly well. Radium is to be preferred for these lesions in children, for the treatment is painless. Warts, occasionally lupus, psoriasis and lichen planus, which are resistant to other treatment, may be destroyed by radium.

Radium is now the accepted treatment of myelogenous leukemia. The white count and the large spleen are reduced by one or two treatments. The effect is only temporary, for later the spleen enlarges and the white count rises. A second series of treatments has less effect than the first, and so on, until finally the patient dies. Lymphatic leukemia may be helped for a time, but the relief is more temporary than in the other type.

Hodgkin's disease, malignant lymphoma, and lympho-sarcoma, as a rule, are easily influenced by radiation. The story is much the same as in leukemia. At first they respond quickly, but when they recur they are more resistant. When radium loses its effect, the end comes very quickly. Certain of the Hodgkin's cases belong to the so-called chronic type and live several years with an occasional treatment. Usually they die from enlargement of the abdominal, retroperitoneal or mediastinal glands.

Metastatic glands of squamous-cell cancer are not affected much by radium. A few cases have been treated by the insertion method, and the glands have become smaller. The glands do not disappear unless they are entirely destroyed, and this endangers neighboring vessels and nerves.

Sarcoma of the small-cell type responds to radium therapy better than the spindle-cell type. Combined operative and radium treatment is frequently the best. If radium is used alone, the insertion type of treatment gives the best results. Many tubes should be inserted into the periphery of the growth.

OTHER USES OF RADIUM.

During the war, radium was used extensively in the manufacture of illuminated airplane dials, watch faces and other indicators. Minute quantities of radium, mixed with phosphorescent sulphide of zinc, caused the zinc compound to glow spontaneously in the dark. The quantity of radium used is not sufficient to give the effect alone, as only from 25 to 300 millionths of a gram are used per gram of material. The sulphide of zinc has a limited ability to cause this effect, so that, if a greater amount of radium is used, the original luminosity is greater, but the decay is more rapid.

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The Massachusetts Medical Society

PROCEEDINGS OF THE SOCIETY.

First Day, May 31, 1921.

THE usual clinics and the sessions of the Sections were omitted owing to the meeting of the American Medical Association in Boston, June 6 to 10, this year. The exercises of the anniversary began with the annual meeting of the Supervising Censors in John Ware Hall, Boston Medical Library, at 4.30 P.M., when Dr. Walter C. Howe acted as secretary *pro tempore*, and the usual business was transacted. The Council meeting followed at 5.00 P.M. (See Proceedings of the Council.) In the evening the Shattuck Lecture was delivered in John Ware Hall, by Dr. Haven Emerson of New York. Subject: "The Prevention of Heart Disease, A New Practical Problem." After the lecture there were light refreshments in the Supper Room.

Second Day, June 1, 1921.

The Society met at the Copley-Plaza Hotel at 9.30 A.M., for the exercises of the one hundred and fortieth anniversary, 130 fellows and guests being present during the morning. The President, Dr. Alfred Worcester, was in the chair. In the absence of the Secretary, Dr. Walter C. Howe was elected secretary *pro tempore*. The reading of the record of the last meeting was omitted by vote and the record as printed and distributed in the BOSTON MEDICAL AND SURGICAL JOURNAL, the official organ of the Society, was adopted. The Secretary read the following statement as to membership for the Society year closing June 1, 1921: Deaths, 54; resignations, 41; deprivations of the privileges of fellowship, 14, making a total loss of 109. There were restored by the Council, 6 fellows and admitted by the Censors, 224, making a total gain of 230, and a net gain for the year of 111. Adding this to the total of last year, 3822, the total membership on June 1, 1921, was 3933.

The following proposed amendment to the By-Laws, approved by the Council, February 2, 1921, was considered:

That Chapter IV, Section 3, of the By-Laws be so amended that the last sentence of paragraph one shall read: "Councilors only, shall be eligible to the offices above named," *viz.*, president, vice-president, secretary, treasurer and librarian, thus conforming the By-Laws to the Statutes, 1803, Chapter 85, Section 3. Digest, Article V, paragraph 3, which provides that the Councilors shall "appoint, from among themselves, a president, and such other officers of the said corporation as are to be so appointed."

The Chair having some doubt as to the advisability of passing this amendment, it was referred by vote to a committee consisting of Dr. W. P. Bowers, Dr. G. O. Ward and Dr. A. K. Stone. This committee reported that the personnel of the Council was defined by Chapter IV, Section 1, of the By-Laws. This section provides that the Council shall consist of Councilors chosen by the district societies, the officers of the parent society, the ex-presidents, the vice-presidents *ex officiis*, and the chairman of each standing committee, the last being elected by the Council itself; that when a man once became a member of that body, even though a member *ex-officio*, he was in good standing and therefore eligible to reëlection to office, until removed by the Society, by resignation or by death. The Chair, not agreeing to this interpretation, it was moved, seconded and voted that this proposed amendment to the By-Laws be laid over until the next annual meeting.

The following proposed amendments to the By-Laws that had received the approval of the Council, February 2, 1921, were put to a vote and adopted unanimously:

Chapter I, Section 2 of the By-Laws: After the words, "fiscal year," line two, insert in parenthesis marks "except as hereafter provided in Section 6 of this chapter"; also Chapter I, Section 6. The last sentence of paragraph one shall read: "The assessment paid by fellows who are admitted to the society following the November examinations, shall be that fixed for the next succeeding fiscal year, and shall cover the dues both for the current year and for the next fiscal year."

The question of continuing the practice of sending delegates to the annual meetings of neighboring state medical societies was raised by the chair and discussed by Dr. E. A. Codman, Dr. S. B. Woodward and Dr. C. E. Abbott. No action was taken.

Dr. A. P. Merrill, referring to the vote of the Council on the previous day (May 31) asking the Secretary of the Society to arrange with the officers of the district medical societies throughout the state for a series of six joint meetings next fall, said that it had been suggested that such meetings could be more advantageously arranged by a committee made up of members from different parts of the state, therefore he *Moved*, That a committee of three be appointed by the chair to have charge of the arrangements for the proposed group meetings of the district medical societies in the fall of the year 1921. The motion being duly seconded, was so voted. In accordance with the vote, the President appointed as this committee: Dr. W. P. Bowers, Clinton; Dr. F. E. Jones, Quincy; Dr. A. P. Merrill, Pittsfield.

Papers were read according to this program:

1. "Maternity Aid and Infant Welfare,"
   Dr. Walter P. Bowers, Clinton.
2. "Legislative Aspects of Vaccination."
   Dr. Samuel B. Woodward, Worcester.
3. "Physical Education of Children and Physical Training in the Public Schools."
   Dr. Joel E. Goldthwait, Boston.
4. "Premedical Education."
   Dr. David L. Edsall, Cambridge.

At twelve o'clock, noon, the Annual Discourse was delivered by Dr. F. W. Anthony of Haverhill. Subject: "Some of the Mutual Relations Between the Physician and the Commonwealth."

The annual dinner was served in the Ball Room at the close of the oration, to 164 fellows and guests. The President said grace, in the absence of the Rev. George A. Gordon, who had been delayed, and introduced the following speakers: His Excellency Channing H. Cox, Governor of Massachusetts; His Honor Andrew J. Peters, Mayor of Boston; Roscoe Pound, dean of the Faculty of Law, Harvard University, the Rev. George A. Gordon, pastor of the New Old South Church, Boston, Dr. Hubert Work, president-elect of the American Medical Association, and Dr. John W. Bartol, president-elect of the Massachusetts Medical Society.

Adjourned at 4 P.M. WALTER C. HOWE.
Secretary pro tempore.

ADMISSIONS REPORTED FROM JUNE 9, 1920, TO JUNE 1, 1922.

Year of Admission.	Name.	Residence.	Medical College
1920	Adams,	Donald Stansbury,	Worcester 35
1921	Adams,	William Bradford,	Springfield 11
1921	Adler,	Stuart Welsh,	Boston 11
1921	Alden,	Augustus Elihu,	North Billerica 24
1920	Allen,	Harold Musgrave,	Lawrence.....12
1920	Atwood,	Warren Gerald,	Boston 11
1921	Bacon,	Joseph Ambrose Patrick,	Lawrence ..31
1921	Barach,	Alvan Leroy,	Boston 17
1920	Barrett,	Charles George,	Worcester 22
1920	Barrow,	Allen Rogers,	Newtonville 12
1921	Bazin,	Edmond Albert,	Haverhill 25
1921	Bean,	Harold Cotton,	Belmont 11
1920	Begg,	Alexander Swanson,	Jamaica Plain ..15
1921	Bell,	James Francis, Jr.,	Boston 28
1921	Benoit,	Samuel Joseph,	Gardner 31
1920	Benson,	Clarence Kirk,	Brighton 12
1921	Berman,	Saul,	Boston 11
1920	Betteridge,	Laurence Augustine,	Boston 12
1921	Bishop,	William Atkins,	Boston 12
1920	Blood,	Guy Frank,	Roslindale 10
1921	Bloombergh,	Horace Deschamps, Chestnut Hill	 6
1921	Bonner,	Clarence Alden,	Worcester 22
1921	Brennan,	John Patrick,	North Adams 20
1921	Brittingham,	Harold Nixon,	Boston 11
1920	Brodrick,	Francis Sidney,	Boston 44
1920	Browder,	Newton Clarence,	Hathorne 11
1920	Bullard,	Carleton Wheeler,	Newburyport ..11
1920	Burnett,	Nathan Lowe,	Cambridge.....45
1921	Burns,	John Edward,	Boston 12
1921	Burwell,	Charles Sidney, Jr.,	Boston 11
1920	Byrnes,	John Peter,	Springfield.....48
1920	Cahill,	Henry Philip,	Boston 11
1921	Campbell,	Charles Macfie,	Cambridge 43
1920	Carr,	Earl Burton,	Melrose 16
1921	Carr,	George Byron,	Lynn 10
1920	Cassidy,	Franklin Chester,	Medford 12
1921	Chaffin,	George Lawrence,	Boston 11
1921	Cheley,	Glen Evan,	Boston 11
1920	Cheney,	Robert Cartwright,	Boston 11
1920	Churchill,	Edward Delos,	Boston 11
1920	Clark,	Cecil Whitehouse,	Newtonville 10
1920	Cliff,	Frederica Leigh,	Boston 10
1921	Colburn,	Frederick Wilkinson,	Boston 10
1920	Cooper,	Alden Vernon,	Lynn 22
1920	Cooper,	Olive Alfreda,	Boston 12
1921	Corea,	George Thomas,	Provincetown 12
1920	Cote,	Corinne Rhea,	Worcester 12
1920	Crane,	George Edward,	Haverhill 25
1920	Crothers,	Bronson,	Boston 11
1920	Cruff,	Frederick Ellery,	Boston 11
1921	Cruikshank,	Frank Sheppard,	Dorchester 12
1920	Cunning,	Daniel Sylvester,	Dorchester 48
1920	Cunningham,	Richard Augustine,	Roslindale 12
1920	Cunningham,	Thomas Donald,	Boston 11
1921	Curran,	Arthur Manning,	North Adams 20
1921	Curran,	William Louis,	North Adams 30
1920	Curtis,	Robert Dudley,	Boston 11
1921	Dahlen,	Carl Albert,	Boston 12
1920	Daniels,	Louis, Riley,	Watertown 10
1921	Davis,	William Lincoln,	Boston 11
1920	DeCesare,	Nicandro Francis,	Lawrence 12
1920	Desmond,	Margaret Ellen,	Boston 12
1920	Diehl,	Harold Edgar,	Quincy 10
1921	Douglass,	Edmund Stowe,	South Barre 22
1920	Doyle,	John Henry,	Fall River 32
1920	Dubins,	Joseph Arthur,	Salem 12
1921	Dudley,	Oscar Albert,	Fitchburg 25
1920	Dunn,	John Henry,	Rockland 12
1920	Duval,	Leon Emile,	East Gardner 22
1921	Eaton,	Charles Alexander,	Boston 10
1921	Edgelow,	Arthur Ford Geddes,	Boston 11
1920	Edmunds,	Fred Andrew,	Shelburne Falls 8

Year of Admission.	Name.	Residence.	Medical College.
1920	Eliot, Martha May,	Boston	6
1920	Emery, Edward Stanley, Jr.,	Boston	11
1921	Fawcett, Deborah,	Newton	10
1920	Fitts, Henry Bird,	Southbridge	35
1920	Fitzgerald, Edmund Boyd,	Quincy	11
1921	Frank, John Raymond,	Boston	23
1920	Fremont-Smith, Maurice,	Boston	11
1920	French, Leland Malcom,	Worcester	12
1920	Fried, Anton Ranseen,	Newtonville	18
1921	Gallagher, James Francis,	Waltham	12
1921	Gilchrist, Bernard Francis,	Springfield	41
1920	Gleason, Mardis Edward,	Newtonville	22
1921	Glover, Donald Mitchell,	Boston	11
1920	Golden, Ross,	Boston	11
1921	Gorin, Nathan,	Roxbury	10
1921	Grabfield, Gustave Philip,	Boston	11
1920	Gurjian, Leon Kevork,	Lynn	12
1921	Hagler, Frederic,	Springfield	3
1920	Haines, Samuel Faitoute,	Boston	11
1921	Ham, William Addison,	Dorchester	10
1920	Hammond, Harry Weymouth,	West Newton	12
1920	Harvey, John Woods,	Lynn	10
1920	Hatt, Ednah Swasey,	Newton	12
1921	Hayes, David Patrick,	Boston	10
1920	Henson, Paul Palmer,	South Yarmouth	12
1920	Hines, Clarence Reynolds,	Amesbury	10
1921	Hodgson, John Sprague,	West Roxbury	11
1920	Hoey, Warren Henry,	Newton Upper Falls	11
1920	Hogan, Daniel John,	Charlestown	12
1921	Holland, John Alexander,	So. Ashburnham	21
1921	Holland, William Joseph,	Malden	4
1921	Hollister, Frederick Martin,	Brockton	22
1921	Hopkins, Frederick Sherman,	Springfield	11
1920	Hosmer, Merrill Fowler,	Springfield	7
1920	Hughes, Frank,	Dorchester	12
1921	Hussey, Earle Edward,	Fall River	11
1921	Iovanna, Nicholas,	Boston	12
1921	Israelian, Agnes Grace,	Boston	12
1920	Jackson, Howard Burr,	Jamaica Plain	11
1920	Jankelson, Isaac Rudolph,	Roxbury	12
1920	Jellis, Walter,	Somerville	12
1921	Jennings, John Greenwood,	Waltham	12
1920	Johnson, Elmon Reuben,	Wollaston	10
1920	Jones, Basil Bradbury,	Boston	41
1921	Jones, Chester Morse,	Boston	11
1921	Jordan, Frank Herbert,	New Bedford	5
1920	Kassees, Saad Hanna Allah,	Lowell	12
1921	Kelley, Edward Paul,	Woburn	25
1920	Kelly, Otis Francis,	Hathorne	11
1920	Kenney, Thomas Hopper,	Northampton	26
1921	Kershaw, George Henry,	Fall River	20
1921	King, Donald Storrs,	Brookline	11
1920	Kitsis, Henry Hyman,	Boston	11
1921	Koppel, William,	Boston	12
1920	Kotler, Moses George,	Brockton	12
1921	Lacey, Henry Orlando,	Somerville	12
1921	Larsson, Johan Gustave,	Boston	9
1920	Laserte, Charles John,	Leominster	32
1920	Lavelle, Gertrude Helen,	Worcester	12
1920	Leverone, Louise May,	Boston	25
1921	Livingston, William Kenneth,	Boston	11
1921	Looney, Joseph Michael,	Somerville	11
1920	Loring, Benjamin Tappan,	Watertown	10
1920	Lucy, John Joseph,	Boston	11
1920	Lund, Charles Carroll,	Boston	11
1920	Lyon, Walter Sidney,	Fall River	22
1920	Mace, Roswell Greenwood,	Springfield	12
1921	Marvin, Harold Myers,	Boston	11
1920	Mason, William,	Fall River	11
1921	Maynard, Herbert Ernest,	Boston	10
1921	McAuslan, James Lewis,	North Grafton	11
1920	McDonald, John Francis,	Lynn	22
1921	McKee, George,	Brighton	25
1920	McKittrick, Leland Sterling,	Boston	11
1921	McLeod, Melvin Saunders,	Melrose	22
1920	Melick, Joel Miller,	Worcester	21
1920	Menard, Leon Joseph,	Fall River	22
1920	Merrill, Ralph Edward,	Boston	11
1920	Mills, Chester Rudolph,	Boston	11
1920	Monroe, Noel Gates,	Southbridge	11
1921	Morse, Frederick Otis,	Newburyport	12
1920	Mullen, Walter John,	Springfield	12
1920	Murphy, Albert Barnard,	Boston	12
1920	Murphy, John Michael,	Florence	12
1920	Murphy, Joseph William Partick,	Peabody	12
1920	Nicholson, Minnie James Cantelo,	Haverhill	25
1920	Nicholson, Minnie James Cantelo,	Haverhill	25
1920	Norman, Samuel,	Malden	10
1921	Norton, Thomas Joseph,	Pittsfield	20
1921	Nye, Robert Nason,	Boston	11
1921	Obler, William Richard,	Boston	11
1920	O'Meara, John William,	Worcester	11
1921	Paine, Mortimer Harwood,	Maynard	12
1920	Pelletier, William Joseph,	Brighton	12
1920	Persons, Carl Clough,	New Bedford	11
1920	Phillips, Frank Elmer,	North Chelmsford	7
1920	Phillips, Karl Tristram,	Worcester	12
1920	Polak, Isaac Benjamin,	Springfield	12
1921	Quinby, Robert Stanley,	Watertown	12
1920	Raleigh, Walter Melvin,	Springfield	12
1921	Randall, Francis Drew,	Malden	22
1920	Randall, Guy Charles,	Lowell	12
1921	Raymond, Albert Orville,	Worcester	12
1921	Remich, Sumner Haven,	New Bedford	12
1921	Risley, John Norman,	New Bedford	19
1920	Roberts, Harry Lewis,	Springfield	12
1921	Roberts, Oscar Brown,	Baldwinsville	36
1920	Rowland, William Denton,	Lynn	46
1920	Saeger, Ernest Tirrill,	Boston	11
1920	Sanders, Morris Blackman,	Boston	11
1920	Saunders, Sallie Harding,	Hopedale	12
1920	Scholz, Samuel Benjamin, Jr.,	Springfield	13
1921	Schunk, Clara Margaret,	Melrose	40
1920	Seaman, James Alpheus,	Springfield	17
1920	Segal, Samuel, Jr.,	Springfield,	12
1920	Senecal, Raymond Ernest,	New Bedford	10
1921	Shaughnessy, Michael James,	Framingham	11
1920	Shaw, Frederick King,	Concord	11
1920	Shedden, William Martindale,	West Newton	11
1920	Shirley, John Newton,	Watertown	11
1920	Silverman (now Sills), William Yale,	Boston	12
1921	Simons, Sigmund,	Boston	12
1921	Simpson, Charles Moffett,	Boston	11
1920	Siragusa, James Joseph,	Brighton	30
1920	Sisco, Dwight Lewis,	Boston	11
1920	Slater, Robert,	Boston	12
1920	Smith, Curtis Everett,	Boston	11
1920	Smith, Lawrence Weld,	Brookline	11
1920	Stamas, Theodore Albert,	Lowell	12
1920	Stein, Louis Charles,	Boston	11
1920	Stillman, Raymond Durgin,	Worcester	11
1921	Swift, Robert,	Roslindale	11
1921	Tierney, Thomas Francis,	Hudson	32
1920	Vartanian, Mardiros Bedros,	Lawrence	47
1921	Vose, Samuel Norton,	Boston	10
1921	Walker, Lewis Marshall,	Boston	11
1920	Walsh, James Henry,	Fall River	7
1920	Wein, Barnet Maurice,	Roxbury	10
1920	Weinberg, Philip Bacon,	Brockton	12
1921	Weissman, Ruth,	Boston	12
1920	Welles, Edward Sawtelle,	Boston	11
1920	Wentworth, Lowell Franklin,	Melrose	14
1920	West, Gustav Frederick,	Roxbury	12
1921	Wickham, George Smallwood,	Lee	11
1920	Wilcox, John Maxon,	Woburn	10
1921	Williams, Carl Alonzo,	Worcester	21
1920	Williams, Charles Amory,	Brookline	11
1921	Wilson, Philip Duncan,	Boston	11
1921	Winestine, Frederica,	Worcester	42
1921	Witte, Max Ernest, Jr.,	Boston	18
1920	Woo, Shutai Tinwäng,	Boston	11
1921	Wood, Russell,	Boston	11
1921	Yorshis, Philip,	Cambridge	12

Total admissions, 224.

KEY TO MEDICAL COLLEGES.

3 Washington University Medical School, St. Louis.
4 Georgetown University School of Medicine.
5 Bowdoin Medical School.
6 Johns Hopkins University, Medical Department.
7 College of Physicians and Surgeons, Baltimore.
8 Baltimore Medical College.
9 Long Island College Hospital, Brooklyn.
10 Boston University School of Medicine.
11 Medical School of Harvard University.
12 Tufts College Medical School.
13 University of Colorado, School of Medicine.
14 Dartmouth Medical School.
15 Drake University College of Medicine, Iowa.
16 George Washington University Medical School, Washington, D. C.
17 Columbia University College of Physicians and Surgeons.
18 State University of Iowa, College of Homeopathic Medicine.
19 University of Pennsylvania, Department of Medicine.
20 Jefferson Medical College.
21 Hahnemann Medical College of Philadelphia.
22 University of Vermont, College of Medicine.
23 Indiana University, School of Medicine.
24 McGill University, Faculty of Medicine, Montreal.
25 College of Physicians and Surgeons, Boston. (Action of Com'tee on Med. Educa. and Med. Dips.)
26 University of the South, Medical Department, Tennessee.
28 University of Oregon, Medical School.
30 University and Bellevue Hospital Medical College.
32 University of Maryland, School of Medicine.
34 Baltimore University, School of Medicine.
35 University of Virginia, Department of Medicine.
36 Medico-Chirurgical College of Philadelphia.
40 College of Physicians and Surgeons, Chicago, Ill.
41 Medical College of Virginia, Richmond.
42 Cornell University Medical College, New York.
43 University of Edinburgh, Scotland.
44 Detroit College of Medicine and Surgery.
45 Queen's University, Faculty of Medicine, Kingston, Canada.
46 University of Michigan, Homeopathic Medical School.
47 University of Illinois, College of Medicne.
48 Albany Medical College.

DEATHS REPORTED FROM JUNE 8, 1920, TO JUNE 1, 1921.

Admitted.	Name.	Place of Death.	Date of Death.	Age.
1884	Allen, Bradford	Nashua, N. H.	May 2, 1921	48
1915	Andrews, Oren	Gardner	April 2, 1921	56
1871	†Barton, Chester Manley	Mitteneague	Oct. 1, 1920	82
1899	Beckley, Chester Charles	Clinton	Feb. 4, 1921	45
1889	Bernard, Barnard Lecherzack	South Boston	Oct. 28, 1920	57
1901	Blake, Le Grande	Riverside, R. I.	April 22, 1921	67
1882	Blanchard, Benjamin Seaver	Brookline	Jan. 14, 1921	64
1868	†Boardman, William Elbridge	Boston	Jan. 11, 1921	76
1903	Brady, James Francis	West Newton	May 2, 1921	48
1890	Brooks, William Allen	Brookline	May 20, 1921	56
1893	Brown, Frank Byron	Dorchester	July 1, 1920	56
1901	Bushnell, Edward Henry	Roxbury	Jan. 23, 1921	55
1855	†Chase, Irah Eaton	Haverhill	Sept. 24, 1919	88
1917	Chisholm, Lawrence Chesley	Bostop	April 2, 1921	29
1895	Conroy, Peter John	Randolph, N. H.	Nov. 27, 1920	65
1904	Crocker, Louis Allen	Brewster,	Jan. 8, 1921	57
1880	Davis, Samuel Thomas	Vineyard Haven	April 18, 1919	62
1887	Deane, Wallace Harlow	Springfield	April 10, 1920	67
1906	Dutton, Julius Malthy	Westfield	Jan. 29, 1921	43
1884	Eames, George Franklin	Scarboro Beach, Me.	Sept. 5, 1920	66
1892	†Faxon, Eudora Meade	Arlington Heights	Feb. 10, 1921	78
1895	Grant, James Henry	Lynn	Dec. 28, 1920	70
1885	Hahn, Albert Johann	Sharon, Vt.	Aug. 1, 1920	67
1870	Hayes, Stephen William	New Bedford	Nov. 2, 1920	72
1882	Howard, Amasa	Chelmsford	March 3, 1921	63
1896	Hughes, Laura Ann Cleophas	Roxbury	July 30, 1920	59
1901	Johnson, Walter Sydney	Los Angeles, Calif.	Sept. 17, 1920	49
1889	Kean, Michael Edward	Manchester, N. H.	Sept. 22, 1920	57
1920	Macdougall, Duncan	Haverhill	Oct. 15, 1920	54
1870	†Marble, John Oliver	Worcester	Dec. 9, 1920	81
1876	†Mather, Edward Elias	Williamstown	May 22, 1921	77
1886	McCarthy, Charles Daniel	Malden	June 22, 1920	59
1897	McCarthy, Charles Florence	Winchester	May 19, 1921	51
1883	Messer, Charles Carson	Turners Falls	May 20, 1920	66
1893	Milot, Alphonse François	Taunton	Nov. 6, 1920	58
1891	Miner, Worthington Warner	Ware	Dec. 19, 1920	73
1885	Morgan, John	Hadlyme, Conn	Aug. 28, 1920	75
1878	†Morong, Arthur Bennett	Boston	May 3, 1921	71
1889	Morris, John Gavin	South Boston	April 14, 1921	65
1895	Peck, Ahlert Fred	Spencer	March 31, 1921	58
1897	Plummer, Frank Joseph	Roxbury	Dec. 2, 1920	64
1872	†Quint, Norman Perkins	Boston	July 27, 1920	73
1880	Robbins, Elliott Daniel	Boston	Dec. 13, 1920	64
1892	Ruppel, Emil Carl Fraser	Lynn	Oct. 10, 1920	61
1885,	Schofield, Walter W	Dalton	July 6, 1920	66
1897	Sears, Harry Edward	Beverly	Oct. 20, 1920	50
1919	Settle, Howard Edwin	Boston	Dec. 20, 1920	29
1885	Smith, Hiram Fred Markley	Orange	Oct. 10, 1918	59
1879	Squier, Angelo Orin	Springfield	Nov. 25 1920	66
1869	Stevens, Andrew Jackson	Malden	Feb. 23, 1921	74

Admitted.	Name.	Place of Death.	Date of Death.	Age.
1883	Sullivan, James Edmund	Providence, R. I.	Oct. 8, 1920	63
1911	Thomas, Charles Holt	Cambridge	Sept. 4, 1920	70
1899	Thorn, Edwin Cyrus	Deerfield	Nov. 12, 1920	45
1874	Whitney, Williiam Fiske	Boston	March 4, 1921	70

Total, 54 Deaths

† Retired Fellow.

OFFICERS OF THE MASSACHUSETTS MEDICAL SOCIETY ELECTED MAY 31, 1921.

President: John W. Bartol, 3 Chestnut Street, Boston.
Vice-President: Brace W. Paddock, 7 North Street, Pittsfield.
Secretary: Walter L. Burrage, 42 Eliot Street, Jamaica Plain.
Treasurer: Arthur K. Stone, Auburn Street, Framingham Center.
Librarian: Edwin H. Brigham, 8 The Fenway, Boston.

STANDING COMMITTEES FOR 1921-1922.

OF ARRANGEMENTS.

Donald Macomber, A. W. Reggio, J. B. Swift, K. G. Percy, F. J. Callanan, Dwight O'Hara.

ON PUBLICATIONS AND SCIENTIFIC PAPERS.

E. W. Taylor, R. B. Osgood, F. T. Lord, R. M. Green, A. C. Getchell.

ON MEMBERSHIP AND FINANCE.

S. B. Woodward, A. Coolidge, Jr., Samuel Crowell, Gilman Osgood, Homer Gage.

ON ETHICS AND DISCIPLINE.

Henry Jackson, T. J. Robinson, David Cheever, F. W. Anthony, R. H. Seelye.

ON MEDICAL EDUCATION AND MEDICAL DIPLOMAS.

C. F. Painter, J. F. Burnham, A. G. Howard, R. L. De Normandie, H. P. Stevens.

ON STATE AND NATIONAL LEGISLATION.

J. W. Bartol, F. G. Wheatley, E. H. Stevens, F. E. Jones, J. S. Stone.

ON PUBLIC HEALTH.

E. H. Bigelow, Annie L. Hamilton, E. F. Cody, Victor Safford, R. I. Lee.

PRESIDENTS OF DISTRICT MEDICAL SOCIETIES.

Vice-Presidents (*Ex-officiis*).

Arranged according to seniority of fellowship in The Massachusetts Medical Society.

E. H. Bigelow	Middlesex South
A. J. Halpin	Middlesex North
A. I. Connell	Bristol South
F. B. Lund	Suffolk
J. J. Goodwin	Worcester
C. D. Knowlton	Norfolk
R. B. Rand	Plymouth
G. F. Dow	Middlesex East
F. E. Jones	Norfolk South
R. S. Ely	Worcester North
Sumner Coolidge	Bristol North
P. P. Johnson	Essex South
F. W. Snow	Essex North
C. P. Curley	Barnstable
G. L. Gabler	Hampden
J. A. Mather	Franklin
G. H. Thompson	Berkshire
A. J. Bonneville	Hampshire

COUNCILORS 1921–1922.

ELECTED BY THE DISTRICT MEDICAL SOCIETIES AT THEIR ANNUAL MEETINGS, APRIL 15 TO MAY 15, 1921, AND COUNCILORS UNDER THE TERMS OF THE BY-LAWS.

NOTE.—The initials M. N. C., following the name of a councilor, indicate that he is a member of the Nominating Committee. V.P. indicates that a member is a councilor by virtue of his office as president of a district society, and so vice-president of the general society. C. indicates that he is chairman of a Standing Committee. Ex-P. indicates ex-President.

BARNSTABLE,

C. P. Curley, Provincetown, V.P.
E. F. Curry, Sagamore.
J. P. Nickerson, West Harwich, M.N.C.

BERKSHIRE,

G. H. Thompson, North Adams, V.P.
Henry Colt, Pittsfield.
A. P. Merrill, Pittsfield.
B. W. Paddock, V.P. Pittsfield.
P. J. Sullivan, Dalton, M.N.C.

BRISTOL NORTH,

Sumner Coolidge, Middleborough, V.P.
W. H. Allen, Mansfield.
F. A. Hubbard, Taunton, M.N.C.
H. G. Ripley, Taunton.

BRISTOL SOUTH,

A. I. Connell, Fall River, V.P.
A. W. Buck, Fall River.
E. F. Cody, New Bedford, M.N.C.
A. B. Cushman, South Dartmouth.
W. A. Dolan, Fall River.
R. W. Jackson, Fall River.
A. H. Mandell, New Bedford.
J. C. Pothier, New Bedford.

ESSEX NORTH,

F. W. Snow, Newburyport, V.P.
R. V. Baketel, Methuen.
J. F. Burnham, Lawrence.
I. J. Clarke, Haverhill.
T. R. Healy, Newburyport, M.N.C.
G. E. Kurth, Lawrence.
J. J. O'Sullivan, Lawrence.
F. B. Pierce, Haverhill.
F. E. Sweetsir, Merrimac.
R. L. Toppan, Newburyport.

ESSEX SOUTH,

P. P. Johnson, Beverly, V.P.
S. P. F. Cook, Gloucester.
J. F. Donaldson, Salem.
H. K. Foster, Peabody.
W. T. Hopkins, Lynn.
J. F. Jordan, Peabody.
G. M. Kline, Beverley.
S. W. Mooring, Gloucester.
E. S. O'Keefe, Lynn.
W. G. Phippen, Salem, M.N.C.
A. N. Sargent Salem.
R. E. Stone, Beverly.

FRANKLIN,

J. A. Mather, Greenfield, V.P.
H. G. Stetson, Greenfield, M.N.C.
C. L. Upton, Shelburne Falls.

Hampden,
G. L. Gabler, Holyoke, V.P.
F. H. Allen, Holyoke.
T. S. Bacon, Springfield.
E. P. Bagg, Jr., Holyoke, M.N.C.
M. D. Chisholm, Westfield.
G. B. Corcoran, West Springfield.
P. M. Cort, Springfield.
Philip Kilroy, Springfield.
E. A. Knowlton, Holyoke.
P. M. Lynch, Springfield.
L. E. Mannix, Chicopee Falls.
H. C. Martin, Springfield.
J. H. Quinn, Springfield.
J. M. Tracy, Springfield.

Hampshire,
A. J. Bonneville, Hatfield, V.P.
O. W. Cobb, Easthampton, M.N.C.
J. E. Hayes, Northampton.
H. B. Perry, Northampton.
D. M. Ryan, Ware.

Middlesex East,
G. F. Dow, Reading, V.P.
L. M. Crosby, Wakefield.
E. D. Richmond, Reading.
C. L. Sopher, Wakefield, M.N.C.
F. T. Woodbury, Wakefield.

Middlesex North,
A. J. Halpin, Lowell, V.P.
W. B. Jackson, Lowell.
J. H. Lambert, Lowell.
G. A. Leahey, Lowell.
J. A. Mehan, Lowell.
M. A. Tighe, Lowell.
E. J. Welch, Lowell, M.N.C.

Middlesex South,
E. H. Bigelow, Framingham, V.P., C.
E. A. Andrews, Newton.
G. A. Bancroft, Natick.
E. W. Barron, Malden.
C. O. Chase, Watertown.
Richard Collins, Waltham.
F. G. Curtis, Newton.
C. A. Dennett, Arlington.
D. C. Dow, Cambridge.
John Duff, Charlestown.
W. E. Fernald, Waverley.
G. W. Gay, Chestnut Hill, Ex.-P.
F. J. Goodridge, Cambridge.
L. S. Hapgood, Cambridge.
C. E. Hills, Natick.
F. R. Jouett, Cambridge.
H. J. Keaney, Everett.
C. E. Mongan, Somerville.
C. F. Painter, Newton, C.
H. S. Rowen, Brighton.
W. D. Ruston, Somerville.
L. F. Sise, Medford.
F. G. Smith, Somervllle.
C. H. Staples, Malden.
E. H. Stevens, Cambridge, M.N.C.
A. K. Stone, Framingham Center, Treas.
F. R. Stubbs, Newton.
Frescnius Van Nlys, Weston.
H. P. Walcott, Cambridge, Ex-P.
G. L. West, Newton.
W. S. Whittemore, Cambridge.
Alfred Worcester, Waltham, Ex-P.

Norfolk,
C. D. Knowlton, Roxbury, V.P.
C. E. Allard, Dorchester.
W. B. Batchelder, Dorchester.
E. H. Baxter, Hyde Park.
D. N. Blakely, Brookline.
E. J. Brearton, Dorchester.
E. H. Brigham, Brookline, Libra.
J. P. Broderick, West Roxbury.
A. N. Broughton, Jamalca Plain, M.N.C.

Norfolk (*continued*),
W. L. Burrage, Jamaica Plain, Sec'y.
J. A. Ceconi, Dorchester.
T. F. Greene, Roxbury.
W. H. Greene, Roxbury.
W. A. Griffin, Sharon.
R. W. Hastings, Brookline.
F. C. Jillson, West Roxbury.
G. W. Kaan, Brookline.
W. B. Keeler, Roxbury.
Bradford Kent, Dorchester.
F. P. McCarthy, Milton.
M. V. Pierce, Milton.
H. H. Powers, Brookline.
Victor Safford, Jamaica Plain.
G. H. Scott, Roxbury.
C. F. Stack, Hyde Park.
Max Sturnick, Dorchester.
Augusta G. Williams, Brookline.

Norfolk South,
F. E. Jones, Quincy, V.P.
C. S. Adams, Wollaston.
O. H. Howe, Cohasset.
G. H. Ryder, Quincy, M.N.C.
G. M. Sheahan, Quincy.

Plymouth,
R. B. Rand, North Abington, V.P.
W. C. Keith, Brockton.
C. E. Lovell, Whitman.
Gilman Osgood, Rockland.
F. J. Ripley, Brockton.
F. G. Wheatley, North Abington, M.N.C.

Suffolk,
F. B. Lund, Boston, V.P.
J. L. Ames, Boston.
S. H. Ayer, Boston.
J. W. Bartol, Boston, Pres., C.
Robert Bonney, East Boston.
J. T. Bottomley, Boston.
V. Y. Bowditch, Boston.
E. G. Brackett, Boston.
J. E. Briggs, Boston.
F. J. Cotton, Boston.
E. A. Crockett, Boston.
Loretta J. Cummins, Boston.
Lincoln Davis, Boston.
W. J. Gallivan, South Boston.
J. E. Goldthwait, Boston.
G. S. Hill, Boston.
W. C. Howe, Boston, M.N.C.
J. C. Hubbard, Boston.
Henry Jackson, Boston, C.
D. F. Jones, Boston.
C. H. Lawrence, Boston, C.
E. A. Locke, Boston.
F. T. Lord, Boston.
Donald Macomber, Boston, C.
B. H. Metcalf, Winthrop.
R. H. Miller, Boston.
J. J. Minot, Boston.
F. S. Newell, Boston.
E. H. Nichols, Boston.
B. W. Pond, Boston.
Edward Reynolds, Boston.
W. H. Robey, Jr., Boston.
Stephen Rushmore, Boston.
D. D. Scannell, Boston.
C. L. Scudder, Boston.
C. M. Smith, Boston.
Myles Standish, Boston.
J. S. Stone, Boston.
E. W. Taylor, Boston, C.
Louisa P. Tingley, Boston.
F. H. Williams, Boston.

Worcester,
J. J. Goodwin, Clinton, V.P.
F. H. Baker, Worcester.
W. P. Bowers, Clinton, Ex-P.

WORCESTER (*continued*),
W. J. Delahanty, Worcester.
G. A. Dix, Worcester.
G. E. Emery, Worcester.
M. F. Fallon, Worcester
Homer Gage, Worcester.
R. W. Greene, Worcester.
David Harrower, Worcester, M.N.C.
E. L. Hunt, Worcester.
A. G. Hurd, Millbury.
W. L. Johnson, Uxbridge.
L. C. Miller, Worcester.
G. F. O'Day, Worcester.
C. B. Stevens, Worcester.
G. O. Ward, Worcester.
F. H. Washburn, Holden.
S. B. Woodward, Worcester, Ex-P., C.

WORCESTER NORTH,
R. S. Ely, Townsend, V.P.
W. E. Currier, Leominster, M.N.C.
J. G. Henry, Winchendon.
H. R. Nye, Leominster.
A. H. Quessy, Fitchburg.

CENSORS, 1921–1922.

BARNSTABLE,
J. P. Nickerson, West Harwich, Supervisor.
C. E. Harris, Hyannis.
E. E. Hawes, Hyannis.
J. H. Higgins, Marstons Mills.
E. S. Osborne, West Dennis.

BERKSHIRE,
Henry Colt, Pittsfield, Supervisor.
J. F. Crowley, Adams.
A. C. England, Pittsfield.
O. J. Brown, North Adams.
E. H. Howard, Pittsfield.

BRISTOL NORTH,
F. A. Hubbard, Taunton, Supervisor.
H. B. Baker, Taunton.
A. R. Crandell, Taunton.
T. F. Clark, Taunton.
T. J. Robinson, Taunton.

BRISTOL SOUTH,
W. A. Dolan, Fall River, Supervisor.
R. W. French, Fall River.
C. J. Leary, New Bedford.
S. V. Merritt, Fall River.
I. N. Tilden, Mattapoisett.

ESSEX NORTH,
R. V. Baketel, Methuen, Supervisor.
J. E. Bryant, Haverhill.
R. C. Hurd, Newburyport.
A. M. Hubbell, Haverhill.
F. S. Smith, North Andover.

ESSEX SOUTH,
J. F. Donaldson, Salem, Supervisor.
J. A. Shatswell, Beverly.
J. W. Trask, Lynn.
F. W. Baldwin, Danvers.
A. T. Hawes, Lynn.

FRANKLIN,
C. L. Upton, Shelburne Falls, Supervisor.
H. N. Howe, Greenfield.
Charles Moline, Sunderland.
R. H. Philbrick, Northfield.
A. L. Newton, Northfield.

HAMPDEN,
J. M. Tracy, Springfield, Supervisor.
C. H. Giroux, Three Rivers.
Frank Holyoke, Holyoke.
F. L. Everett, Springfield.
A. C. Eastman, Springfield.

HAMPSHIRE,
J. E. Hayes, Northampton, Supervisor.
F. E. Dow, Northampton.
W. J. Collins, Northampton.
H. G. Rockwell, Amherst.
W. P. Stutson, Cummington.

MIDDLESEX EAST,
E. D. Richmond, Reading, Supervisor.
F. O. West, Woburn.
A. L. Brown, Winchester.
M. D. Sheehan, Stoneham.
Ralph Putnam, Winchester.

MIDDLESEX NORTH,
J. H. Lambert, Lowell, Supervisor.
E. J. Clark, Lowell.
G. A. Lavallée, Lowell.
J. A. Gage, Tyngsborough.
J. P. McAdams, Lowell.

MIDDLESEX SOUTH,
F. G. Smith, Somerville, Supervisor.
C. B. Fuller, Waltham.
I. J. Fisher, West Newton.
James Glass, Framingham.
J. P. Nelligan, Cambridge.

NORFOLK,
C. F. Stack, Hyde Park, (acting) Supervisor.
E. T. Rollins, Jamaica Plain.
T. J. Murphy, Roxbury.
G. G. Bulfinch, Brookline.
A. A. MacDonald, Dorchester.

NORFOLK SOUTH,
G. M. Sheahan, Quincy, Supervisor.
A. J. Roach, South Braintree.
F. W. Crawford, Holbrook.
W. G. Curtis, Wollaston.
F. E. Burke, Quincy.

PLYMOUTH,
F. J. Ripley, Brockton, Supervisor.
J. E. Drohan, Brockton.
E. J. Beaulieu, Whitman.
W. W. Fullerton, Brockton.
L. B. Reed, Plymouth.

SUFFOLK,
C. M. Smith, Boston, Supervisor.
G. B. Fenwick, Chelsea.
T. J. O'Brien, Boston.
J. S. Stone, Boston.
R. H. Vose, Boston.

WORCESTER,
F. H. Washburn, Holden, Supervisor.
L. R. Bragg, Webster.
E. H. Mackay, Clinton.
C. A. Sparrow, Worcester.
E. H. Trowbridge, Worcester.

WORCESTER NORTH,
J. G. Henry, Winchendon, Supervisor.
W. F. Robie, Baldwinsville.
G. P. Norton, Fitchburg.
H. Jacques, Fitchburg.
C. S. Brigham, Leominster.

COMMISSIONERS OF TRIALS.
1921–1922.

BARNSTABLE, E. S. Osborne, West Dennis.
BERKSHIRE, F. C. Downing, Stockbridge.
BRISTOL NORTH, C. S. Holden, Attleborough.
BRISTOL SOUTH, D. P. O'Brien, New Bedford.
ESSEX NORTH, J. F. Croston, Haverhill.
ESSEX SOUTH, J. E. Simpson, Salem.
FRANKLIN, P. F. Leary, Turners Falls.
HAMPDEN, R. H. Seelyé, Springfield.
HAMPSHIRE, S. A. Clark, Northampton.
MIDDLESEX EAST, V. C. Stewart, Woburn.
MIDDLESEX NORTH, F. E. Varney, North Chelmsford.
MIDDLESEX SOUTH, A. G. Griffin, Malden.
NORFOLK, M. V. Pierce, Milton.
NORFOLK SOUTH, N. S. Hunting, Quincy.
PLYMOUTH, Gilman Osgood, Rockland.
SUFFOLK, Channing Frothingham, Boston.
WORCESTER, W. P. Bowers, Clinton.
WORCESTER NORTH, E. P. Miller, Fitchburg.

OFFICERS OF THE DISTRICT MEDICAL SOCIETIES.

Elected by the District Medical Societies.

(Some of these are corrected by the returns received since the annual meetings in the spring of 1921.)

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BERKSHIRE.—G. H. Thompson, North Adams, *President;* G. P. Hunt, Pittsfield, *Vice-President;* W. H. Walker, Jr., Pittsfield, *Secretary;* C. T. Leslie, Pittsfield, *Treasurer.*

BRISTOL NORTH.—Sumner Coolidge, Taunton, *President;* W. O. Hewitt, Attleborough, *Vice-President;* A. R. Crandell, Taunton, *Secretary;* R. D. Dean, Taunton, *Treasurer.*

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ESSEX NORTH.—F. W. Snow, Newburyport, *President;* F. D. McAllister, Lawrence, *Vice-President;* J. F. Burnham, Lawrence, *Secretary and Treasurer.*

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Book Reviews.

Repressed Emotions. By ISADOR CORIAT, M.D. New York: Brentano's. 1920.

The purpose of this small volume is, apparparently, to educate the popular mind in the principles of psycho-analysis. It is readable and interesting and likely to encourage lay readers, who may be in doubt as to the value of this method, to further pursuit of the subject. Although its teachings are those of the out-and-out Freudian school, the exclusive worship of the sex instinct, which is thought by its critics to appeal loudly and dangerously to the young and inexperienced thinker, is much less in evidence than might be expected.

Through the application of psycho-analytic methods of inquiry, the author traces the influence of repressed emotions from the remotest ages of the past and finds them at the root of many of the myths and customs of primitive peoples. As showing how they pervade literature he analyzes in detail the mental condition of various characters in novels. He emphasizes the value of psycho-analysis in education, particularly that of the young, as a preventive of future neurosis. Its influence upon character-formation, religion, ethics, art, society, delinquency, etc., is also positively set forth. Finally, he credits psycho-analysis, as elaborated by Freud, with "a new psychology, a new neurology and a new school of literary criticism." Such sweeping claims are at least debatable and, as regards neurology, far from the fact. The book also treats, rather largely and somewhat technically, on the treatments of functional nervous disorders regarding which certain dogmatic statements are made which may be misleading. It is asserted, for example, that "psycho-analysis can alone cure a neurosis," and the implication is made that it is the be-all and end-all of the therapy of such disorders. This dictum can hardly be reconciled with the opinion of authoritative advocates of this method to the effect that, even if it were possible, there is no reason for undertaking it in the majority of cases as they can be cured in much shorter ways.

ACKNOWLEDGMENT.

To the local members of the profession and its kind friends who so generously contributed their automobiles for the entertainment of the visiting Fellows of the American Medical Association at its recent session, and thereby added so much to the enjoyment and success of the meeting, the Committee on Transportation, of the Entertainment Committee, wishes to acknowledge its deep sense of appreciation and thanks.

LINCOLN DAVIS, *Chairman.*
GEORGE A. LELAND, JR., *Secretary.*

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Established in 1828

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The Journal does not hold itself responsible for statements made by any contributor.

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ANNUAL MEETING OF THE A. C. AND C. ASSOCIATION.

The American Climalogical and Clinical Association held its annual meeting at Lenox, June 3 and 4, under the leadership of President Carroll E. Edson of Denver. Dr. A. K. Storer is Secretary and Treasurer, and Dr. Cleveland Floyd is Recorder.

The papers read were of wide scope and value. Subjects presented were:

1. Occult Tuberculosis.
H. R. M. LANDIS, Philadelphia, Pa.
2. Hyperthyroidism and Tuberculosis.
PHILIP K. BROWN, San Francisco, Cal.
3. Subdiaphragmatic Inflammatory Conditions, Especially those Simulating Chest Conditions.
ROGER I. LEE, Cambridge, Mass.
4. A Study of Patients, Especially Asthmatics, with reference to Endocrine Dysfunctioning.
JAY PERKINS, Providence, R. I.
5. Discussion: The Management of Dyspnoea.
Dyspnoea due to Diseases of the Circulatory System.
R. H. BABCOCK, Chicago, Ill.
Dyspnoea due to Diseases of the Respiratory Organs.
G. W. NORRIS, Philadelphia, Pa.
Dyspnoea from Renal and Toxic Origins.
J. A. LICHTY, Pittsburgh, Pa.
By Invitation the discussion was opened by CHARLES H. HOOVER, M.D., Cleveland, Ohio.
6. Outdoor Schools. J. W. BRANNAN, New York.
7. Monitor Ventilation.
W. A. GRIFFIN, Sharon, Mass.
8. The Value of Vital Capacity Determinations in the Diagnosis of Myocardial Insufficiency.
J. H. PRATT, Boston, Mass.
9. Analysis of Eighty Cases of Functional Disease in Soldiers. J. M. SWAN, Rochester, N. Y.
10. Lyon Method of Draining the Biliary System for Diagnosis and Treatment.
F. J. DEVER, Bethlehem, Pa.
11. An Epidemic of Scarlet Fever with Interesting Complications.
DAVID R. LYMAN, Wallingford, Conn.
12. Extensive Rib Resection in the Treatment of Pulmonary Tuberculosis: Report of four cases.
D. C. PARFITT, Gravenhurst, Can.
13. Influence of Periapical Dental Infection upon the Leucocytes.
JUDSON DALAND, Philadelphia, Pa.
14. Pneumonia.
C. E. QUIMBY and JOHN McCABE, New York.
15. The Heart Muscle Changes in Pneumonia.
W. J. STONE, Pasadena, Cal.
16. Nathan Strong, Jr. A pioneer in the early history of Epidemic Cerebro-Spinal Meningitis.
W. R. STEINER, Hartford, Conn.
17. Three Cases of Artificial Pneumothorax (a) Bronchiectasis; (b) Pulmonary Abscess and Hemorrhage; (c) Acute Tuberculosis Pneumonia.
C. H. JOHNSON, Grand Rapids, Mich.
18. The Prevailing Beliefs about Infection in Tuberculosis. E. R. BALDWIN, Saranac Lake, N. Y.
19. A Case of Tuberculosis of the Spinal Cord. Lantern Slides.
C. C. BROWNING, Los Angeles, Cal.
20. X-ray Studies in Postural Rest.
G. B. WEBB, Colorado Springs, Colo.
21. Chaulmoogra Oil Derivatives in the Treatment of Pulmonary Tuberculosis.
P. K. BROWN and E. L. WALKER, San Francisco, Cal.
22. Tuberculosis of Husband and Wife.
H. L. BARNES, Wallum Lake, R. I.
23. Anti-tuberculosis Work in Canada.
G. D. PORTER, Toronto, Canada.
24. Tuberculosis Problem in Ex-Service Men.
J. O. COBB, Staten Island, N. Y.
25. Brehmer and His Teachings.
H. M. KINGHORN, Saranac Lake, N. Y.
26. Lymphoblastoma of the Stomach.
STERLING RUFFIN, Washington, D. C.
27. Group Practice.
GORDON WILSON, Baltimore, Md.

Anyone wishing especial information relative to these subjects can communicate with the authors. Dr. Floyd presents an abstract of one paper as follows:

STUDIES OF THYROID DYSFUNCTIONING WITH SPECIAL REFERENCE TO ASTHMA.

Dr. Perkins showed charts of patients representing the nerve symptoms which one finds in asthma, and demonstrated that the same line of symptoms, except for the difficult breathing, is found in patients complaining of so-called "nervousness," in some functional heart disease, in some cases of tuberculosis, in some cases of bronchitis and in all cases of asthma, and in practically all of the cases presenting these symptoms there is present a dysfunctioning of the thyroid gland. He cited numerous cases

under the various headings showing the similarity in the history, and considered that the evidence warranted the conclusions that the various conditions noted were due to one and the same cause, usually thyroid dysfunctioning.

In asthma he considers that primarily the disease, especially as found in children, is due to hyperthyroidism, and that the disease can be cured in children. In asthma there is a vicious circle. The thyroid secretion increases the patient's nervousness and the nervousness increases the action of the thyroid. If this circle can be broken and the regular rest treatment simulated, the disease can be cured, and this is best done by giving sedative treatment such as small doses of apomorphine hydrochloride (Crystalline), tincture of hyoscyamus and tincture of valerian. This must be continued for a long time. In older people, where the thyroid has been over-active for many years, a condition is found frequently where the asthmatic attacks have ceased, but the patient is still disabled because of secondary functional or organic disturbances which still persist even though the original cause is removed. The same is true of these patients when treated. The asthmatic condition can be cured, but the secondary effects cannot wholly be removed.

He stated that in his opinion, while proteids and odors can bring on attacks of asthma, these merely act as excitants, and are not the real cause. Treating cases on the basis that the thyroid is the organ involved, not only do the asthmatic paroxysms disappear even in cases where they were brought on by proteids or odors, but other unpleasant manifestations brought on by proteids, such as indigestion or nausea, also disappear.

HAVERHILL TUBERCULOSIS ASSOCIATION.

Communities which are showing interest in health problems are urged to observe the work done by the Haverhill Tuberculosis Association, for this organization is one of the most progressive in the state.

The results obtained in that city are due in a great degree to medical direction and oversight, acting in close co-operation with the City Board of Health. The people of Haverhill have endorsed the work done in a liberal way.

The hospital for tuberculosis patients is a model of its kind and the situation is ideal.

The Association has felt that one great difficulty in the early recognition of tuberculosis has been lack of painstaking care in the early study of doubtful cases, and in order to assist physicians has prepared a simple history card for the physician's use on which may be recorded all essential facts relating to a suspected or recognized case.

The value of such a card lies in keeping before the doctor suggestions of the details of the essential investigation and a record of conditions found. These cards may be obtained at the JOURNAL office and at the medical supply stores at a cost of five cents each. All profits from the sale will be used to continue and extend the work in Haverhill.

On a following page of this issue of the JOURNAL will be found a reduced facsimile of both sides of this history card.

MEDICAL NOTES.

THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER announces the death of Dr. Harry M. Sherman, Regional Director for the states of California and Nevada. Dr. Sherman had been a director of the society since its organization and had taken up the work with renewed interest at the solicitation of Dr. Powers. He had recently given much attention to organizing the work and had traveled extensively, meeting various committees in both states.

RESOLUTION.—At the recent meeting of the New York State Medical Society, the following resolution was passed:

> Be It Resolved, that the House of Delegates of the New York State Medical Society, in convention assembled at Brooklyn, New York, on May 2, 1921, does heartily endorse the efforts of the American Society for the Control of Cancer, and earnestly bespeaks the fullest coöperation of all the Branch Districts and County Societies in the State, to desseminate useful facts concerning this disease to the laity and to bring the members of the profession itself to a fuller appreciation of their responsibilities in this campaign.

The Sisters of Providence announce the opening of the new wing of St. Vincent Hospital, Worcester, Mass. This building, which has just been completed at a cost of $300,000, has fifty beds in private rooms, an operating suite of three rooms, a maternity ward, and complete pathological, chemical and X-ray laboratories. The private rooms are unusually large and the decorations and furnishings homelike.

Miscellany.

REPORT OF DEPARTMENT OF PUBLIC UTILITIES CONCERNING TELEPHONE RATES.

Petition of the Somerville Medical Society in the matter of the application to doctors of medicine, under certain circumstances, of the business classification of the New England Telephone and Telegraph Company.

This is a petition of the Somerville Medical Society objecting to doctors of medicine being included, under certain circumstances, within the business classification of the New England Telephone and Telegraph Company.

The company, in its schedule of rates, distinguishes between business and residence service, and makes a higher rate in the former case than in the latter. In its "commercial practices" it provides that "residence service rates permit the use of the service for social or domestic purposes, but do not permit extensive local use for business purposes." "The use of the service by . . . physicians . . . who have one main station only . . . is obviously primarily for business purposes," and "the advertising in any way of a station designation by any subscriber shall be considered as proper evidence that the use of the service is not primarily for social or domestic purposes." It has recently endeavored to apply these tests to physicians whose alleged primary use of their telephone service at their residences is for the pursuit of their profession. It is to this application of the classification that objection is made by the petitioners in this case.

We are not concerned, in this matter, with the difference between telephones at places of business as opposed to telephones at residences, and we do not, therefore, attempt, at the present time, to pass upon the soundness of this distinction. We are only concerned with the question of the use by doctors of medicine of telephones at their residences. The distinction which the company makes in the uses of telephones at residences is, taking their schedules and practices as a whole, one based upon the question of primary use, and the rate depends upon whether the primary use of the telephone at a residence is for business purposes, on the one hand, or for social or domestic purposes on the other. The phrases which occur in the company's "commercial practices," quoted above, beyond establishing this distinction, merely constitute presumptions or rules of evidence for the determination of the application of the test in particular cases. This was the interpretation given them at the hearing by the counsel of the company, and seems to us essentially sound. As all arguments in this case have been addressed solely to the application of this test in this particular matter, we do not regard the soundness of the distinction itself as necessarily involved in the decision of this case, and we do not, therefore, undertake to pass upon it at the present time.

The real questions before us, therefore, are whether the use made by a doctor of medicine of a telephone at his residence can ever properly be classed as a business use within the meaning of the schedules and practices of the company, and if so, when.

It is argued by the petitioners that the practice of medicine is not a business. This would undoubtedly be true if the test were the difference between business and professional use. Here, however, the contrast is between business and social or domestic use, and, as a consequence, we think the word "business" is meant to cover not only all businesses in the strictest sense of that term, but also all professions, vocations or occupations by which livelihoods are made. The underlying purpose of the classification is to enable the user of the telephone for social or domestic uses to have that service at a lower rate than the user for occupational purposes. While nobody can deny the noble and beneficent nature of the profession of medicine, it seems equally clear that nobody can deny that its practice is the method through which most doctors of medicine earn their living. So it seems to us evident that, when we endeavor to contrast occupational uses with social or domestic uses, we must include in the former term uses of the telephone at residences made in the course of the practice of medicine, however much we must recognize that many doctors of medicine are actuated in the practice of their profession not so much by the thought of pecuniary gain as by the desire to be of service to mankind.

Some emphasis has been put by the petitioners upon the fact that most of the use of doctors' telephone service is made not by the doctor calling up a patient, but by the patient seeking the advice or assistance of the doctor; or, to put it more briefly, that most of the calls are inward calls instead of outward ones. This does not seem to us to alter substantially the real nature of the transaction. It is probably true that many

commercial houses pay large rents, not so much to enable them to be in a good position to call upon their customers, as to be readily accessible themselves to the demands of those who wish to deal with them. The same is undoubtedly true of the use of the telephone by many commercial concerns. Whether the telephone is there primarily to enable the doctor to call up a patient or a nurse, or to enable a nurse or a patient or the patient's family to call up the doctor, does not change the nature of the situation. It is, in any event, all connected with and an inseparable part of the doctor's practice of his profession.

We are, therefore, constrained to hold that there may be cases where the use of telephone service by a doctor of medicine at his residence constitutes primarily an occupational use within the meaning of the classification of the company as we construe it.

The next question is, under what circumstances use of the telephone by a doctor of medicine at his residence shall be regarded as primarily an occupational use.

We do not agree with the statement made in the company's "commercial practices" that "the use of the service by . . . physicians . . . who have one main station only . . . is obviously primarily for business purposes," and we are opposed to the application of this standard as a final test.

The petitioners contend that the word "doctor" is not only a designation of an occupation, but also a title and, in many instances, an important mode of identification. The company acquiesces in this view, and is entirely content that in the future the abbreviation "Dr." may appear in the telephone directory after a doctor's name without that being taken to indicate that his use of the telephone at his residence is primarily occupational as opposed to social or domestic. We understand that hereafter the abbreviation "Dr." will be inserted after the name of any doctor who desires it, without prejudicing in the slightest degree his claim that the use of his telephone at his residence is primarily social or domestic. The company feels, however, that if he desires the word "physician" inserted after his name, that this term cannot be justified as a title or mark of identification, but must stand as a description of his occupation, and, consequently, that where this word is desired after the name the company will feel justified in treating that service as primarily occupational service. This attitude of the company was developed by suggestions from the members of the Commission during the course of the hearings. It seems to us a reasonable one, and is, accordingly, adopted by us as the expression of the views of this Department, also, in this matter.

This leaves the situation, then, in this shape: A doctor of medicine who desires the word "physician" inserted after his name may be treated by the company as having definitely stated that the use of the telephone at his residence is primarily for occupational purposes. A doctor of medicine, on the other hand, who does not desire the word "physician" inserted after his name, but is content with the insertion of the abbreviation "Dr." thereafter, shall not be bound by the interpretation stated above, but shall pay business rates only (1) if he admits that his use of the telephone at his residence is primarily for occupational purposes, or, (2) if he does not concede this fact, but the evidence clearly indicates that this is the primary or chief use to which his telephone is being put,—which we hope will very rarely prove to be the case. Where, however, the use of his telephone at his residence is primarily for social or domestic purposes, the doctor is bound to pay only residential rates.

Very likely a number of physicians have reported their telephones one way or the other without the foregoing distinctions clearly in mind. It seems to us highly proper, therefore, that the company should base its future ratings of doctors upon such listing as may be adopted and such classification as may result therefrom in the light of this decision, and should disregard such listing and such classification of physicians at their residences as has been previously made. The company should, in brief, recanvass the situation anew.

In view of the consent of the company to comply with the foregoing views, it seems unnecessary at the present time to make any order in the premises except a formal one, and it is accordingly

ORDERED, That this petition be dismissed without prejudice.

By order of the Commission,
(Signed) ANDREW A. HIGHLANDS, *Secretary.*

THE INDEX TO VOLUME CLXXXIV of the BOSTON MEDICAL AND SURGICAL JOURNAL, which volume ends with this issue (June 30, 1921), is being printed to go out to all subscribers so it may be used by those who desire to have their magazines bound into one volume. Anyone interested can secure a copy of this index, free, by making request for the same at the JOURNAL office.

COMMISSION ON MILK STANDARDS.

A summary report by the Commission on Milk Standards for the nine years ending December 10, 1920, recently published by the U. S. Public Health Service, contains matters of much interest to health officers and to chemists and bacteriologists.

Standard whole milk, says the report, should contain not less than 8.5 percent milk solids, not fat, and 3.25 percent milk fat; standard skim milk not less than 8.75 percent of milk solids; standard cream not less than 18 percent milk fat, and be free from all constituents foreign to normal milk.

The Commission believes that it is necessary to permit standardized and adjusted milk; this despite the fact that it recognizes the ease with which milk is contaminated and the difficulty of so controlling standardizing, skimming, homogenizing, souring, etc., as to prevent contamination and the use of inferior materials. The manipulation of the milk, however, should be controlled; the product should be labeled "adjusted milk" (the label showing the minimum guaranteed percent of fat); and the milk should comply with the sanitary and chemical requirements of unmodified milk.

To meet conditions in cities where milk contains less than 8.5 percent solids, not fat, milk sellers should be permitted to choose whether they will sell under the regular standard or under a guaranteed statement of composition. The sale of any normal milk should be permitted if its percent of fat is stated. If this is not stated, the sale should be held to be unlawful unless the milk contains 3.25 percent milk fat. Dealers selling under the guarantee plan should be required to state the guarantee conspicuously on all milk containers.

The number of bacteria in milk depends on dirt, temperature and age. Specific disease bacteria are not often present, and the difficulty of detecting them by laboratory methods renders these of little value in guarding milk against specific disease. The only practical safeguard is by medical, veterinary, and sanitary inspection and by pasteurization.

Bacterial counts indicate the safety and the "decency" of milk. Small numbers of bacteria indicate fresh milk, produced under clean conditions and kept cool; large numbers indicate dirty, warm, or stale milk.

Bacteria in milk are related to infant mortality. Children fed on milk containing few bacteria show a lower death rate than those fed on milk containing many. Bacteria harmless to adults may cause infant diarrhœa; and milk containing large numbers is apt to contain species capable of setting up intestinal inflammation in infants.

The interests of public health demand that the production and distribution of milk should include frequent bacterial laboratory examinations. In making the counts the methods of the American Public Health Association Laboratory Section should be used. To meet the charges often made that pasteurization is used to cover up careless or filthy methods, milk should be required to measure up to standard both before and after pasteurization.

Extensive study justifies the conclusion that bacterial analyses of duplicate samples of milk by routine methods in different laboratories vary about 28 percent. Tests of five samples will give fairly accurate results and will always permit any milk to be accurately graded. At least four of the five should show fewer bacteria than the maximum allowed for the grade awarded. Grading should never be based on a single sample.

The Commission on Milk Standards, which was established in March, 1911, by the New York Milk Committee, a voluntary organization, consists, at the present time, of seven public health officials, six bacteriologists, four chemists, and two agricultural experts. Fourteen have been physicians, three have long practical experience in the milk industry, and six have been connected with the production and control of certified milk.

RESOLUTIONS BY THE AMERICAN MEDICAL EDITORS' ASSOCIATION.

The following resolutions were passed at the 52nd annual meeting of the American Medical Editors' Association, June 7th, and the Secretary was authorized to send you a copy for publication:

WHEREAS: The medical restrictions of the Volstead Act, together with its various administrative and other interpretations and rules and regulations and enforcements, etc., constitute, in some of their effects, indictment of the medical profession and harrassment of the medical practitioner and the sick, and are obstacles to free pursuit of honest medical judgment and therapeutics, and have reacted to the detriment of society and the public health and are opposed to public policy;

AND WHEREAS: Some of these restrictions and

rules and regulations and interpretations, etc., are not based upon concensus of medical experience and practice and established usage;

And whereas: It is apparent that they have not been framed and interpreted and administered with full appreciation of all matters involved;

And whereas: The precedent established by the Volstead Act in restricting medical practice should, if physicians value their therapeutic liberty, be met with a protest that will command attention;

And whereas: The point at issue is the right of the physician to select his remedies, and to decide what doses of these remedies each patient requires;

And whereas: This issue in no wise affects and has nothing to do with propaganda either for or against prohibition, but is purely a matter of preserving the necessary rights of the physician in the interests of public health and public policy:

Be it therefore resolved: That the American Medical Editors' Association protests against further undue regulation of therapeutic procedure by statutes or by administrative interpretation or regulation;

And be it resolved: That the Association requests of the proper authorities a review and revision of such existing statutes or rules or regulations as may be unduly restrictive of the therapeutic judgment and procedure of physicians.

We ask this for the preservation of the necessary rights of the medical profession and in the name of public welfare and wise public policy.

NARCOTIC REGISTRANTS.

Collector of Internal Revenue John J. Mitchell has issued the last call to narcotic registrants who are due to file returns on or before July 1st. This means that all doctors, dentists, or druggists who wish to continue handling or prescribing narcotic drugs for the period July 1, 1921, to June 30, 1922, must file returns immediately to avoid the addition of a penalty.

Absolutely no extension of time will be granted narcotic registrants. In case of late filing a 25% penalty will be attached. If this is a second offense, the delinquent will also be held liable to a specific penalty in addition to the first.

The regular meeting of the New England Association for Physical Therapeutics was held on Tuesday, June 28th, at eight o'clock at the Hotel Victoria, 271 Dartmouth Street, Boston. The subject of the evening was "The Employment of Physical Auxiliaries to Increase the Efficiency of X-ray Therapy," by Drs deKraft and Titus, of New York City.

Correspondence.

HOSPITAL AND DISPENSARY CLINICS A BANE TO THE GENERAL PRACTITIONER.

June 16, 1921.

Mr. Editor:—

I would like to call the attention of the profession to the further encroachments of the various hospitals and dispensaries of Boston on the practice of the medical men of Boston and vicinity.

It appears that all classes are welcome, particularly the well-to-do, in practically all the clinics of the city. The Peter Bent Brigham keeps open all day so as not to miss any patients that would be coming to the common doctors of Roxbury.

Now the Boston Dispensary is running a thriving clinic at night for the "poor" who have to work during the day. Most of these cases are venereal, men and women who are perfectly able to pay; but this institution appears to be so hungry for patients that they have no thought about the injury they do to the profession.

Most of the hospitals, and the Boston Dispensary, employ "social workers" who act as "runners" for the various institutions. Whether to hold their easy, lucrative positions, or otherwise, I cannot judge, but they offer the prospective patients the greatest specialists in the world, free, at their respective clinics. One of these young women even offered one of my patients two quarts of milk daily if she would bring her family and herself to the Boston Dispensary to be examined by the "experts" there.

Whether they are taught to or not, I do not know, but there is a movement among social workers, school nurses and others to divert all people who need medical services to the dispensaries and hospitals. Patronize and pauperize is the slogan.

The medical men who practice medicine as an avocation (wealthy men) who do not know the need of a dollar, are the ones to blame for the present situation. In their eagerness to have a clinic to practice on, they do not consider those whom they injure.

There are enough people in Greater Boston who need medical attention to keep every physician in our district busy were it not for the dispensaries and hospital clinics. As the late lamented Dr. Brooks truthfully said, all of the dispensaries and most of the hospital clinics could be closed with great benefit to the people as a whole.

In going through a large hospital a few days ago, I was struck with the large number of patients who should be at home, treated by their family physician, whose convalescence could be materially shortened by home surroundings and better medical attention; and a sad thing to say is that a number of these same patients were sent in by our brethren, who should know better.

There is a law in Massachusetts which gives an injured employee the right to go to any physician he chooses. Not one employee in a hundred knows of such a law, and when a man is injured he thinks that he must go to the cheap dispensary or hospital that his employer indicates. As a result, thousands of dollars are lost to the profession weekly.

The Somerville Medical Society (not the Massachusetts Medical Society) has taken this matter up, and I expect something will be done.

The Massachusetts Medical Society could remedy the abuses which are committed by the leaders of the profession, but, unfortunately, the officers of the Society have not of late interested themselves in the welfare of the general practitioner.

I may mention the telephone "increase" hearing, which was so successfully won by the Somerville Society. I did not hear anyone at the hearing representing the Massachusetts Medical Society. Who will say that the hearing should not have been asked for

and conducted by the Massachusetts Medical Society?

Medical men can help, with benefit to themselves and their patients, by treating their cases at home or in "open" hospitals where the family doctor has control of his patient. Many of our best men have ruined their practice by sending patients to public hospitals to have the patients' ills diagnosed by immature house officers.

The remedy is partly up to the family doctor himself. He should see that material is not supplied to hospitals and dispensaries. If concerted action was taken by the profession, I am sure the growing hospital and dispensary nuisance could be considerably abated.

CHARLES MALONE, M.D.

46 St. John Street,
Jamaica Plain, Mass.

NOTICES.

AMERICAN PSYCHIATRIC SOCIETY.—At the seventy-seventh meeting of the American Medico-Pathological Association, held in Boston, May 31, to June 3, inclusive, a new constitution was adopted which provided, among other slight changes, a change in name of the organization, which will hereafter be known as the American Psychiatric Association.

The publication, *American Journal of Insanity*, Johns Hopkins Press, Baltimore, Md., will, hereafter, be the official organ of the Association and will be published under a new name, *The American Journal of Psychiatry*, while the former transactions bound in book form, will be omitted. The newly elected officers are: Albert M. Barrett, M.D., President, Ann Arbor, Mich.; H. W. Mitchell, M.D., Vice-President, Warren, Pa.; C. Floyd Haviland, M.D., Secretary-Treasurer, Middletown, Conn.

RESOLUTION UNANIMOUSLY ADOPTED BY THE SOMERVILLE MEDICAL SOCIETY AT A MEETING HELD JUNE 24, 1921.—*Resolved:* That the Somerville Medical Society by a unanimous vote enthusiastically supports and endorses the formation of a Mutual Insurance Society in the Massachusetts Medical Society as advocated in the BOSTON MEDICAL AND SURGICAL JOURNAL, and that the Secretary of the Somerville Medical Society notify its members to attend any and all meetings that may be held for the formation of such insurance organization.

M. W. WHITE, *President*,
EDMUND H. ROBBINS, *Secretary*.

PULMONARY TUBERCULOSIS HISTORY CARD.

Date 192 Age

Res. Occup. Nat.

F. M.

B. S.

Hist. cough in G. P's. Uns. or Amts

P. H. Prolong. Cough Expect., Amt. etc.

Hemop. Pleurisy. Eff. Pneum.

Bronch. La Grippe Typhoid

Fistula. Malaria Measles.

Enlarg. glands. Oth. dis. Syphilis Operat. or inju.

As a Child—strong robust,—slim wiry—delicate, Menst.

P. I.

Began with Stop. work

Cough Exp. Amt. etc. Strength

App. Digest. Bowels Sweats

Hoarseness. Sleep. Dyspn.

REVERSE SIDE.

P. E. Gen App. Ht. Max. Norm. Pres. Loss of lbs.

P. T. R. Teeth. Wt.

M. Memb. Thro't. Fing.

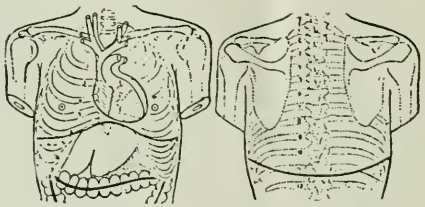
Ht. Apex. Mur's.

Ap. outlines Dep. above Clav.

Hgb. Thyroid Complic.

Diag. Sput.

(Cough and Long Breath) Treat.



Stage	Prog.
Incip.	Favor
Mod ad.	Doubt
Far. ad.	Unfav.

See JOURNAL, page 711.

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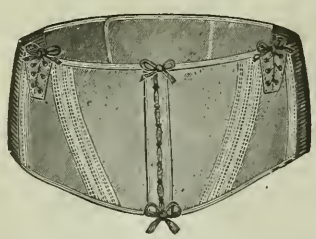

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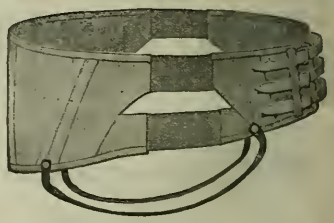

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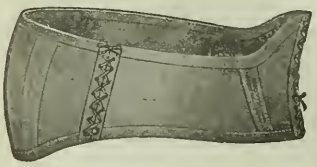

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